

containing a trace amount of CT (about 0.1%) can be used practically as a potent adjuvant for nasal %vaccination% of humans against influenza.

1994

7/3,AB/11 (Item 11 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
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07772748 BIOSIS NO.: 000092076119

INTRANASAL IMMUNIZATION USING THE %B% %SUBUNIT% OF THE %ESCHERICHIA%-%COLI%  
HEAT-LABILE TOXIN FUSED TO AN EPITOPE OF THE BORDETELLA-PERTUSSIS P.69  
ANTIGEN

AUTHOR: LIPSCOMBE M; CHARLES I G; ROBERTS M; DOUGAN G; TITE J; FAIRWEATHER  
N F

AUTHOR ADDRESS: DEP. MOL. BIOL., WELLCOME RES. LAB., LANGLEY COURT,  
BECKENHAM, KENT BR3 3BS, UK.

JOURNAL: MOL MICROBIOL 5 (6). 1991. 1385-1392. 1991


FULL JOURNAL NAME: Molecular Microbiology

CODEN: MOMIE

RECORD TYPE: Abstract

LANGUAGE: ENGLISH

ABSTRACT: The plasmid pBRD026, which directs expression of the %B%  
%subunit% of the %Escherichia% %coli% heat-labile toxin (LBT), was  
modified so that DNA encoding epitopes could be inserted at the 3' end of  
the gene. An oligonucleotide linker containing restriction sites for  
BglII and SpeI was inserted at the SpeI site at the 3' end of the %LTB%  
gene to form plasmid pFV1. This linker also encodes the amino acid  
sequence Gly-Pro-Gly-Pro which we propose acts as a 'hinge' between the  
%LTB% and the foreign epitope. Oligonucleotides specifying an epitope  
from the Bordetella pertussis P.69 outer membrane protein were cloned  
into pFV1 to form pFV169. The resultant fusion protein (LTB69) was  
partially purified from the periplasm of %E%. %coli% strains in a soluble  
pentameric form which could bind GM1 gangliosides. Mice immunized  
intranasally with purified LTB69 produced antibodies, against both %LTB%  
and the P.69 protein. In addition, ELISPOT assays demonstrated the  
presence of %LTB%-specific and P.69-specific antibody-secreting cells in  
the lung of immunized mice.



1991

7/3,AB/12 (Item 12 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
(c) 2001 BIOSIS. All rts. reserv.

06148195 BIOSIS NO.: 000085111347

ORAL %VACCINATION% IDENTIFICATION OF CLASSES OF PROTEINS THAT PROVOKE AN  
IMMUNE RESPONSE UPON ORAL FEEDING

AUTHOR: DE AIZPURUA H J; RUSSELL-JONES G J

AUTHOR ADDRESS: IMMUNOCHEM. LAB., BIOTECHNOL. AUSTRALIA PTY. LTD., P.O. BOX  
20, E. ROSEVILLE NSW 2069, SIDNEY, AUSTRALIA.

JOURNAL: J EXP MED 167 (2). 1988. 440-451. 1988

FULL JOURNAL NAME: Journal of Experimental Medicine

CODEN: JEMEA

RECORD TYPE: Abstract

LANGUAGE: ENGLISH

ABSTRACT: Oral immunization of an animal is generally hard to achieve  
unless large quantities of antigen are administered. In this study a  
number of antigens were tested for their ability to elicit a systemic  
immune response upon oral administration. It was found that bacterial  
pili, %LTB%, lectins, and a viral hemagglutinin were all able to elicit  
significant antibody titers upon oral feeding. The immune response thus  
generated to %LTB% and K99 pili could be completely abolished by  
cofeeding a number of sugars that have close structural homology to the  
terminal sugars of the GM1 and GM2 gangliosides to which these molecules

INST/SEATTLE//WA/98195; UNIV WASHINGTON, SCH MED, DEPT BIOL  
STRUCT/SEATTLE//WA/98195; UNIV WASHINGTON, SCH MED, DEPT  
PHARMACOL/SEATTLE//WA/98195; UNIV WASHINGTON, SCH MED, DEPT  
BIOCHEM/SEATTLE//WA/98195

Journal: INFECTION AND IMMUNITY, 1996, V64, N12 (DEC), P5413-5416  
ISSN: 0019-9567

Language: ENGLISH Document Type: ARTICLE

Abstract: The %Escherichia% %coli% heat-labile enterotoxin (LT) is a potent inducer of mucosal immune responses. In a previous study (L. DeHaan, W. R. Verweij, M. Holtrop, E. Agsteribbe, and J. Wilschut, %Vaccine% 14:620-626, 1996), we have shown that efficient induction of an %LTB%-specific mucosal immune response by LT requires the presence of the LTA chain, suggesting a possible role of the enzymatic activity of LTA in the induction of these responses. In the present study, we generated LT mutants, with altered ADP-ribosylation activities and evaluated their immunogenicity upon intranasal administration to mice. The results demonstrate that the mucosal immunogenicity of LT is not dependent on its ADP-ribosylation activity.

7/3, AB/17 (Item 2 from file: 34)  
DIALOG(R) File 34:SciSearch(R) Cited Ref Sci  
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04734850 Genuine Article#: UD976 Number of References: 33  
Title: A CONTINUOUS EPITOPE FROM TRANSMISSIBLE GASTROENTERITIS VIRUS S-PROTEIN FUSED TO %ESCHERICHIA%- %COLI% HEAT-LABILE TOXIN %B%- %SUBUNIT% EXPRESSED BY ATTENUATED SALMONELLA INDUCES SERUM AND SECRETORY IMMUNITY (Abstract Available)

Author(s): SMERDOU C; ANTON IM; PLANA J; CURTISS R; ENJUANES L  
Corporate Source: UNIV AUTONOMA MADRID, CTR NACL BIOTECNOL, DEPT MOLEC & CELL BIOL, CSIC, CANTO BLANCO/E-28049 MADRID//SPAIN/; UNIV AUTONOMA MADRID, CTR NACL BIOTECNOL, DEPT MOLEC & CELL BIOL, CSIC/E-28049 MADRID//SPAIN/; LAB SOBRINO/OLOT//SPAIN/; WASHINGTON UNIV, DEPT BIOL/ST LOUIS//MO/63130

Journal: VIRUS RESEARCH, 1996, V41, N1 (MAR), P1-9  
ISSN: 0168-1702

Language: ENGLISH Document Type: ARTICLE

Abstract: Antigenic site D from the spike protein of transmissible gastroenteritis virus (TGEV), which is a continuous epitope critical in neutralization, has been expressed as a fusion protein with E. coli heat-labile toxin %B% %subunit% (LT-B) in attenuated S. typhimurium. Synthetic peptides containing the sequence of site D induced TGEV neutralizing antibodies when inoculated subcutaneously in both rabbits and swine. A synthetic oligonucleotide encoding residues 373-398 of TGEV S protein, including antigenic site D, was cloned in frame with the 3' end of LT-B gene, into a plasmid used to transform S. typhimurium Delta asd chi 3730. A collection of 6 recombinant plasmids designated pYALTB-D I-VI encoding %LTB%-site D fusions with a variable number of site D sequences were selected. Four of the 6 %LTB%-site D fusion products expressed in S. typhimurium chi 3730 formed oligomers (pentamers) that dissociated at >70 degrees. S. typhimurium chi 3730 (pYALTB-D) V and VI expressed the oligomer forming products with higher antigenicity. Partially purified %LTB%-site D fusion product expressed from S. typhimurium chi 3730 (pYALTB-D) V induced anti-TGEV neutralizing antibodies in rabbits. Recombinant %vaccine% strain S. typhimurium Delta cya Delta erp Delta asd chi 13987 transformed with plasmid pYALTB-D V expressed constitutively products that formed oligomers presumably containing 20 copies of site D, and showed a high stability in vitro. This recombinant strain was orally inoculated in rabbits and induced TGEV specific antibodies in both serum and intestinal secretion.

7/3, AB/18 (Item 1 from file: 73)  
DIALOG(R) File 73:EMBASE  
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06735694 EMBASE No: 1997017164  
Immunogenicity of a fusion protein linking the beta subunit carboxyl

7/3,AB/6 (Item 6 from file: 5)  
DIALOG(R)File 5: BIOSIS Previews(R)  
(c) 2001 BIOSIS. All rts. reserv.

10369548 BIOSIS NO.: 199698824466

A continuous epitope from transmissible gastroenteritis virus S protein fused to %E%. %coli% heat-labile toxin %B% %subunit% expressed by attenuated Salmonella induces serum and secretory immunity.

AUTHOR: Smerdou Cristian; Anton Ines M; Plana Juan; Curtissi Roy Ii; Enjuanes Luis(a)

AUTHOR ADDRESS: (a)Dep. Molecular Cell Biol., Centro Nacional de Biotecnologia, CSIC, Campus Universidad Autonoma, \*\*Spain

JOURNAL: Virus Research 41 (1):p1-9 1996

ISSN: 0168-1702

DOCUMENT TYPE: Article

RECORD TYPE: Abstract

LANGUAGE: English

ABSTRACT: Antigenic site D from the spike protein of transmissible gastroenteritis virus (TGEV), which is a continuous epitope critical in neutralization, has been expressed as a fusion protein with %E%. %coli% heat-labile toxin %B% %subunit% (LT-B) in attenuated S. typhimurium. Synthetic peptides containing the sequence of site D induced TGEV neutralizing antibodies when inoculated subcutaneously in both rabbits and swine. A synthetic oligonucleotide encoding residues 373-398 of TGEV S protein, including antigenic site D, was cloned in frame with the 3' end of LT-B gene, into a plasmid used to transform S. typhimurium DELTA-asd chi-3730. A collection of 6 recombinant plasmids designated pYALTB-D I-VI encoding %LTB%-site D fusions with a variable number of site D sequences were selected. Four of the 6 %LTB%-site D fusion products expressed in S. typhimurium chi-3730 formed oligomers (pentamers) that dissociated at gt 700. S. typhimurium chi-3730 (pYALTB-D) V and VI expressed the oligomer forming products with higher antigenicity. Partially purified %LTB%-site D fusion product expressed from S. typhimurium chi-3730 (pYALTB-D) V induced anti-TGEV neutralizing antibodies in rabbits. Recombinant %vaccine% strain S. typhimurium DELTA-cya DELTA-crp-DELTA-asd chi-3987 transformed with plasmid pYALTB-D V expressed constitutively products that formed oligomers presumably containing 20 copies of site D, and showed a high stability in vitro. This recombinant strain was orally inoculated in rabbits and induced TGEV specific antibodies in both serum and intestinal secretion.

1996

7/3,AB/7 (Item 7 from file: 5)  
DIALOG(R)File 5: BIOSIS Previews(R)  
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10289188 BIOSIS NO.: 199698744106

Antibody responses in volunteers induced by nasal influenza %vaccine% combined with %Escherichia% %coli% heat-labile enterotoxin %B% %subunit% containing a trace amount of the %holotoxin%.

AUTHOR: Hashigucci Kazuhiro(a); Ogawa Hiroshi; Ishidate Takeo; Yamashita Ryoko; Kamiya Hitoshi; Watanabe Kouji; Hattori Nobuaki; Sato Takaaki; Suzuki Yujiro; Nagamine Takashi; Aizawa Chikara; Tamura Shin-Ichi; Kurata Takeshi; Oya Akira

AUTHOR ADDRESS: (a)E.N.T. Dep., Kitasato Inst. Hosp., 5-9-1 Shirokane Minato-ku, Tokyo 108\*\*Japan

JOURNAL: Vaccine 14 (2):p113-119 1996

ISSN: 0264-410X

DOCUMENT TYPE: Article

RECORD TYPE: Abstract

LANGUAGE: English

ABSTRACT: Evaluation of the efficacy of nasal influenza %vaccine% combined with %Escherichia% %coli% heat-labile enterotoxin %B% %subunit% (%LTB%)

Construction of a bivalent candidate %vaccine% strain against ETEC and Salmonella disease - %Escherichia% %coli% heat-labile enterotoxin %B% %subunit% gene expression in Salmonella typhimurium for bivalent recombinant %vaccine% construction (conference abstract)  
AUTHOR: Chen T; Yang X; Zhang B; Cheng X; Huang C  
CORPORATE SOURCE: Molecular Genetics Center, Institute of Biotechnology, 27 Taiping Road, Beijing 100850, People's Republic of China.  
JOURNAL: Vaccine (10, 4, 278) 1992  
CODEN: VACCDE  
LANGUAGE: English

ABSTRACT: Enterotoxigenic %Escherichia% %coli% (ETEC) is one of the most important pathogens that cause diarrhea in China, especially in children less than 5 years old. The main pathogenic factor, the heat-labile (LT) operon, was isolated from the large plasmid of ETEC and a clone was obtained that effectively expressed LT. The %B% %subunit% gene of LT encoding an antigen component without toxicity was isolated and subsequently subcloned into a vector plasmid carrying an asd+ gene marker. The recombinant plasmid was introduced into an avirulent cya-, crp- and asd-deleted strain of Salmonella typhimurium by 2 transformations. The hybrid strain was a balanced lethal recombinant without a drug-resistance gene, and the expressed %LTB% had immunogenicity activity at a high level. The strain afforded protection to animal models after immunization orally or parenterically. Since avirulent S. typhimurium strains could invade the GALT and stimulate immunoreaction, the strain constructed could be considered as a candidate bivalent live oral %vaccine% strain against ETEC diarrhea and related Salmonella disease. (0 ref)

7/3,AB/29 (Item 6 from file: 357)  
DIALOG(R)File 357:Derwent Biotechnology Abs  
(c) 2002 Derwent Publ Ltd. All rts. reserv.

0119139 DBA Accession No.: 91-06781 PATENT  
Fusion protein used to treat virus and pathogenic protozoal and bacterial infections - contains recombinant heat labile enterotoxin %B% %subunit% and e.g. herpes simplex virus antigen; expression in CHO-HDT-2-35, Sp-neo-HDT-13-71 cell culture; DNA sequence; potential recombinant %vaccine%

PATENT ASSIGNEE: Takeda-Chem. 1991  
PATENT NUMBER: EP 418626 PATENT DATE: 910327 WPI ACCESSION NO.: 91-088294 (9113)  
PRIORITY APPLIC. NO.: JP 89233728 APPLIC. DATE: 890908  
NATIONAL APPLIC. NO.: EP 90116878 APPLIC. DATE: 900903  
LANGUAGE: English

ABSTRACT: A fusion protein (A) comprising a heat-labile enterotoxin %B% %subunit% (%LTB%), or a functional fragment of it, and a protein heterologous to heat-labile enterotoxin (LT) is claimed. Also claimed are: i. a recombinant DNA sequence (I) encoding (A); ii. a transformant containing (I); iii. a method for producing (A) by cultivating the transformant and purifying (A); and iv. a method for purifying (A) comprising a herpes simplex virus (HSV) surface antigen (SA) and (%LTB%). Specifically claimed are transformant CHO-HDT-2-35 (FERM BP-2590) and transformant Sp-neo-HDT-13-71 (FERM BP-3071). Preferably, the HSV SA is gD or gB, optionally lacking a transmembrane domain, of HSV type-I or -II and is fused to %LTB% via a linker. %LTB% is a product of enterogenic %Escherichia% %coli% isolated from a human. In the protein of (iv.) the HSV SA is arranged on the N-terminal side and %LTB% on the C-terminal side. The SA-%LTB% can enhance the absorption of the bioactive protein through nasal mucosa tissues. The proteins are useful as immunogens for therapeutic and preventive %vaccines% or for treatment of viral, pathogenic protozoa or bacterial infections. (34pp)

X

contains  
both  
LTB  
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i.e.,  
comprises  
LTA

7/3,AB/30 (Item 7 from file: 357)  
DIALOG(R)File 357:Derwent Biotechnology Abs  
(c) 2002 Derwent Publ Ltd. All rts. reserv.

0080938 DBA Accession No.: 88-11787

S7 71 RD (unique items)  
? s s7 and-influenza

71 S7  
248302 INFLUENZA  
S8 23 S7 AND INFLUENZA  
? t s8/3,ab/1-23

>>>No matching display code(s) found in file(s): 65, 129, 332, 336, 390,  
398, 447

8/3,AB/1 (Item 1 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
(c) 2001 BIOSIS. All rts. reserv.

11197767 BIOSIS NO.: 199799818912  
Effects of frequent intranasal administration of adjuvant-combined  
%influenza% %vaccine% on the protection against virus infection.  
AUTHOR: Tamura Shin-Ichi(a); Yajima Ayako; Hatori Emiko; Tamura Shu;  
Asanuma Hideki; Suzuki Yujiro; Aizawa Chikara; Kurata Takeshi  
AUTHOR ADDRESS: (a)Dep. Pathol., National Inst. Infectious Diseases, 1-23-1  
Toyama, Shinjuku-ku, Tokyo 162\*\*Japan  
JOURNAL: Vaccine 15 (16):p1784-1790 1997  
ISSN: 0264-410X  
RECORD TYPE: Abstract  
LANGUAGE: English

ABSTRACT: In previous papers, we have shown that %Escherichia% %coli%  
heat-labile enterotoxin %B% %subunit%, supplemented with a trace amount  
of the %holotoxin% (%LTB%\*) could be used as a potent adjuvant for a  
nasal %influenza% HA (haemagglutinin) %vaccine% in humans. The present  
study was designed to determine whether the effectiveness of a combined  
%LTB%\*-HA %vaccine% could be limited by preexisting immunity to %LTB% and  
how many times the adjuvant-combined %vaccine% could be administered  
intranasally without reducing its protective efficacy in BALB/c, C3H and  
B10 mice. The magnitude of both nasal and serum Ab responses to HA  
%vaccine% was correlated with the degree of protection against virus  
infection. Higher doses of %LTB%\*-combined %vaccine% were required for  
inducing high enough levels of anti-HA Ab responses to provide complete  
protection in low responder mice. Repeated pretreatments with %LTB%\*  
alone (more than six times), which provided high levels of preexisting  
Abs to %LTB%, inhibited the induction of anti-HA Ab responses and reduced  
the protective efficacy of the adjuvant-combined %vaccine%. However, the  
%LTB%\*-combined %vaccine% could be given repeatedly (about ten times) to  
mice without reducing the effectiveness of the adjuvant-combined  
%vaccine%. These results suggest that the %LTB%\*-combined nasal  
%influenza% %vaccine% can be given to humans once every few years when an  
epidemic of %influenza% may occur.

1997

8/3,AB/2 (Item 2 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
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10289188 BIOSIS NO.: 199698744106  
Antibody responses in volunteers induced by nasal %influenza% %vaccine%  
combined with %Escherichia% %coli% heat-labile enterotoxin %B% %subunit%  
containing a trace amount of the %holotoxin%.  
AUTHOR: Hashigucci Kazuhiro(a); Ogawa Hiroshi; Ishidate Takeo; Yamashita  
Ryoko; Kamiya Hitoshi; Watanabe Kouji; Hattori Nobuaki; Sato Takaaki;  
Suzuki Yujiro; Nagamine Takashi; Aizawa Chikara; Tamura Shin-Ichi; Kurata  
Takeshi; Oya Akira  
AUTHOR ADDRESS: (a)E.N.T. Dep., Kitasato Inst. Hosp., 5-9-1 Shirokane  
Minato-ku, Tokyo 108\*\*Japan  
JOURNAL: Vaccine 14 (2):p113-119 1996  
ISSN: 0264-410X  
DOCUMENT TYPE: Article

pro

Wogood!

request  
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library

uses  
trace  
holotoxin

RECORD TYPE: Abstract  
LANGUAGE: English

ABSTRACT: Evaluation of the efficacy of nasal %influenza% %vaccine% combined with %Escherichia% %coli% heat-labile enterotoxin %B% %subunit% (%LTB%) containing a trace amount of the %holotoxin% (LT) in inducing antibody responses among volunteers, which was conducted during the winter season of 1993-1994, is reported. A trivalent inactivated %vaccine%, composed of A/Yamagata/32/89 (H1N1), A/Kitakyusyu/159/93 (H3N2) and B/Bangkok/163/90 %influenza%, virus strains, was used alone or together with the adjuvant, recombinant %LTB% supplemented with 0.5% recombinant LT (%LTB%). The volunteers were divided into two groups: 73 volunteers (mean age 35.0 +/- 12.0 years) inoculated intranasally (i.n.) with %LTB%\*-combined %vaccine% and 49 volunteers (37.9 +/- 11.3) inoculated i.n. with the %vaccine% alone. %Vaccination% was done twice 4 weeks apart. Salivary secretory IgA and serum hemagglutination-inhibiting (HI) antibodies were measured before and 8 weeks after the primary %vaccination%. For the sake of convenience, more than a 1.4-fold rise in IgA antibody response (units of specific IgA antibody per mu-g of total IgA) and a fourfold or greater rise in HI antibody titer after %vaccination% were regarded as a positive antibody response. Thirty-seven (50.3%) and 36 (49.3%) of the 73 %vaccinees%, respectively, given the nasal %LTB%\*-combined %vaccine% showed positive IgA and HI antibody responses to one or more of the three %vaccine% strains. In comparison, positive antibody responses in the group given %vaccine% alone were 32.7% for IgA and 30.6% for HI antibody. There was a significant difference between these two groups. These results suggest that the nasal %LTB%\*-combined %vaccine% could enhance the production of higher levels not only of serum HI antibody but IgA antibodies in the respiratory tract than do the nasal %vaccine% alone.

1996

8/3,AB/3 (Item 3 from file: 5)  
DIALOG(R)File 5:BIOSIS Previews(R)  
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09489174 BIOSIS NO.: 199497497544

%Escherichia% %coli% heat-labile enterotoxin B subunits supplemented with a trace amounts of the %holotoxin% as an adjuvant for nasal %influenza% %vaccine%.

AUTHOR: Tamura Shin-Ichi(a); Asanuma Hideki; Tomita Toshio; Komase Katsuhiko; Kawahara Kazuyoshi; Danbara Hirofumi; Hattori Nobuyuki; Watanabe Kouji; Suzuki Yujiro; et al

AUTHOR ADDRESS: (a)Dep. Pathol., NIH, 1-23-1 Toyama, Shinjuku-ku, Tokyo 162  
\*\*Japan

JOURNAL: Vaccine 12 (12):p1083-1089 1994

ISSN: 0264-410X

DOCUMENT TYPE: Article

RECORD TYPE: Abstract

LANGUAGE: English

ABSTRACT: %Escherichia% %coli% heat-labile enterotoxin %B% %subunit% (%LTB%) (2 mu-g), supplemented with a trace amount of the %holotoxin% (LT) (0.02-20 ng), was examined for the adjuvant effect on antibody (Ab) responses against %influenza% inactivated haemagglutinin (HA) %vaccine% in Balb/c mice. Each mouse received a primary intranasal (i.n.) inoculation with the %vaccine% (1.5 mu-g), prepared from PR8 (H1N1) virus, together with LT-containing %LTB% and in 4 weeks a second i.n. inoculation of the %vaccine% alone. The inoculation of the %vaccine% with the LT-containing %LTB% induced significantly high primary and secondary anti-HA IgA and IgG Ab responses in the nasal wash and the serum, while the %vaccine% with %LTB% or less than 2 ng of LT induced little response. The synergistic adjuvant effect was maximal in the concentration of %LTB% supplemented with 0.2-2 ng of LT. Under these conditions, the augmented IgA and IgG Ab responses, which are cross-protective to PR8 HA molecules, provided complete cross-protection against PR8 virus challenge in mice immunized with heterologous %vaccine% within the same subtype. These

results suggest that %LTB% containing a trace amount of LT can be used as a potent adjuvant for nasal %vaccination% of humans against %influenza%.

1994

8/3,AB/4 (Item 4 from file: 5)  
DIALOG(R)File 5:BIOSIS Previews(R)  
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09235508 BIOSIS NO.: 199497243878

Synergistic action of cholera toxin %B% %subunit% (and %Escherichia% %coli% heat-labile toxin %B% %subunit%) and a trace amount of cholera whole toxin as an adjuvant for nasal %influenza% %vaccine%.

AUTHOR: Tamura Shin-Ichi(a); Yamanaka Aya; Shimohara Miyuki; Tomita Toshio; Komase Katsuhiro; Tsuda Yusuke; Suzuki Yujiro; Nagamine Takashi; Kawahara Kazuyoshi; Danbara Hirofumi; Aizawa Chikara; Oya Akira; Kurata Takeshi

AUTHOR ADDRESS: (a)Dep. Pathol., Natl. Inst. Health, 1-23-1 Toyama, Shinjuku-ku, Tokyo 162\*\*Japan

JOURNAL: Vaccine 12 (5):p419-426 1994

ISSN: 0264-410X

DOCUMENT TYPE: Article

RECORD TYPE: Abstract

LANGUAGE: English

ABSTRACT: Cholera toxin %B% %subunit% (CTB) and %Escherichia% %coli% heat-labile toxin (%LTB%) (2 mu-g), each supplemented with a trace amount of cholera toxin (CT) (0.02-20 ng), were examined for the adjuvant effect on antibody (Ab) response against %influenza% inactivated HA (hemagglutinin) %vaccine% in Balb/c mice. Each mouse received a primary intranasal (i.n.) inoculation of the %vaccine% (1.5 mu-g) and the CT-containing CTB and in 4 weeks a second i.n. inoculation of the %vaccine% alone. The primary inoculation of the %vaccine% with CTB alone did not induce either anti-HA IgA or IgG Ab response, or hemagglutination-inhibition Ab responses in the serum. The %vaccine% with less than 2 ng of CT also failed to induce Ab response. On the other hand, the %vaccine% with CT-containing CTB induced a high Ah response, which increased depending on the CT dose. Moreover, the second %vaccine% induced a response more than ten times higher than the primary one and the response increased depending on the CT dose. Similar enhancement was found in the local anti-HA IgA Ab response in the nasal wash. Such synergistic effects were observed also between %LTB% and CT. The amount of Ab produced by the synergism was considered to be enough to protect against virus infection. These results suggest that CTB (or %LTB%) containing a trace amount of CT (about 0.1%) can be used practically as a potent adjuvant for nasal %vaccination% of humans against %influenza%.

1994

8/3,AB/5 (Item 5 from file: 5)  
DIALOG(R)File 5:BIOSIS Previews(R)  
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06148195 BIOSIS NO.: 000085111347

ORAL %VACCINATION% IDENTIFICATION OF CLASSES OF PROTEINS THAT PROVOKE AN IMMUNE RESPONSE UPON ORAL FEEDING

AUTHOR: DE AIZPURUA H J; RUSSELL-JONES G J

AUTHOR ADDRESS: IMMUNOCHEM. LAB., BIOTECHNOL. AUSTRALIA PTY. LTD., P.O. BOX 20, E. ROSEVILLE NSW 2069, SIDNEY, AUSTRALIA.

JOURNAL: J EXP MED 167 (2). 1988. 440-451. 1988

FULL JOURNAL NAME: Journal of Experimental Medicine

CODEN: JEMEA

RECORD TYPE: Abstract

LANGUAGE: ENGLISH

ABSTRACT: Oral immunization of an animal is generally hard to achieve unless large quantities of antigen are administered. In this study a number of antigens were tested for their ability to elicit a systemic

immune response upon oral administration. It was found that bacterial pili, %LTB%, lectins, and a viral hemagglutinin were all able to elicit significant antibody titers upon oral feeding. The immune response thus generated to %LTB% and K99 pili could be completely abolished by cofeeding a number of sugars that have close structural homology to the terminal sugars of the GM1 and GM2 gangliosides to which these molecules are known to bind. All of the proteins that were active in oral immunization are known to possess "lectin or lectin-like" binding activities. It is therefore proposed that these molecules are able to bind to glycolipids and glycoproteins on the intestinal mucosa and to stimulate these cells to transport the proteins into the systemic circulation, thereby eliciting a systemic immune response. Molecules that did not possess this binding activity were unable to elicit significant responses at the doses tested.

1988

8/3,AB/6 (Item 1 from file: 155)  
DIALOG(R)File 155:MEDLINE(R)

09304334 97231796 PMID: 9077073

Efficacy of nasal %influenza% %vaccine% combined with %Escherichia% %coli% heat-labile enterotoxin %B% %subunit% containing a trace amount of the %holotoxin% in healthy volunteers]

Hashigucci K; Tamura S; Kurata T; Kamiya H; Ishidate T  
E.N.T. Department, Kitasato Institute Hospital.

Kansenshogaku zasshi (JAPAN) Feb 1997, 71 (2) p153-61, ISSN  
0387-5911 Journal Code: IJR

Languages: JAPANESE

Document type: Clinical Trial; Controlled Clinical Trial; Journal Article  
Record type: Completed

We conducted a field trial to evaluate the efficacy of nasal %influenza% %vaccine% combined with %Escherichia% %coli% heat-labile enterotoxin %B% %subunit% (%LTB%) containing a trace amount of the %holotoxin% (LT) in preventing or attenuating %influenza% among volunteers during the winter season of 1994-1995. A trivalent inactivated %influenza% %vaccine%, composed of A/Yamagata/32/89 (H1N1), A/Kitakyusyu/159/93 (H2N2) and B/Mie/1/93 %influenza% virus strains, was administered intranasally together with recombinant %LTB% containing 1% recombinant LT (%LTB%). %Vaccination% was done twice 4 weeks apart. Salivary secretory IgA and serum HI antibodies were measured before and 8 weeks after the primary %vaccination%. Thirty-two volunteers were enrolled in this study; 18 volunteers (mean age 37.7 +/- 11.3) were given %LTB%\*-combined %vaccine% and 14 volunteers (mean age 44.1 +/- 11.3) given placebo. Outbreaks of H3N2 subtype and B type virus were observed during this study period. Six (42.9%) of the 14 volunteers in the placebo group and 3 (16.7%) of the 18 receiving the %LTB%\*-combined %vaccine% contracted %influenza%. There was no statistically significant difference between the two groups, because the number of subjects was small. Higher percentage of positive IgA and HI antibody responses among %vaccines% given %vaccine% with %LTB%\* were observed as compared with those in the placebo group. Positive IgA antibody response to all %vaccine% strains were observed in 46.7% (7/15) of the %vaccine% group. On the other hand, none of the placebo group showed positive IgA antibody response to all %vaccine% strains. These results suggest that nasal %influenza% %vaccine% with %LTB%\* appears to be effective in preventing %influenza%.

8/3,AB/7 (Item 1 from file: 654)  
DIALOG(R)File 654:US PAT.FULL.  
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02705715

Utility

IMMUNOLOGICAL TOLERANCE-INDUCING AGENT

[ Administering autoantigen linked to a mucosa-binding molecule by transdermal delivery across mucous membranes]



PATENT NO.: 5,681,571  
ISSUED: October 28, 1997 (19971028)  
INVENTOR(s): Holmgren, Jan, Vastra Frolunda, SE (Sweden)  
Czerkinsky, Cecil, Goteborg, SE (Sweden)  
ASSIGNEE(s): Duotol AB, (A Non-U.S. Company or Corporation), Vastra  
Frolunda, SE (Sweden)  
[Assignee Code(s): 43594]  
APPL. NO.: 8-184,458  
FILED: January 19, 1994 (19940119)  
PRIORITY: 9303301, SE (Sweden), October 8, 1993 (19931008)

This is a continuation-in-part of application Ser. No. 08-160,106, filed Nov. 30, 1993, now abandoned.

FULL TEXT: 1352 lines

#### ABSTRACT

An immunological tolerance-inducing agent comprising a mucosa-binding molecule linked to a specific tolerogen is disclosed. Further, a method of inducing immunological tolerance in an individual against a specific antigen, including hapten, which causes an unwanted immune response in said individual comprising administration by a mucosal route of an immunologically effective amount of an immunological tolerance-inducing agent of the invention to said individual, is described.

8/3,AB/8 (Item 2 from file: 654)  
DIALOG(R)File 654:US PAT.FULL.  
(c) format only 2002 The Dialog Corp. All rts. reserv.

02605673

Utility  
FUSION PROTEINS  
[ Formation of pentamer complex and binding to gangliosides and hinges of glycineproline and antigens or epitopes]

PATENT NO.: 5,589,384  
ISSUED: December 31, 1996 (19961231)  
INVENTOR(s): Lipscombe, Martin J., Cambridge, GB (United Kingdom)  
Charles, Ian G., Beckenham, GB (United Kingdom)  
Fairweather, Neil F., Beckenham, GB (United Kingdom)  
ASSIGNEE(s): Glaxo Wellcome Inc, (A U.S. Company or Corporation), Research  
Triangle Park, NC (North Carolina), US (United States of  
America)  
[Assignee Code(s): 37399]  
APPL. NO.: 8-237,716  
FILED: May 02, 1994 (19940502)  
PRIORITY: 9112553.4, GB (United Kingdom), June 11, 1991 (19910611)

This is a continuation of application Ser. No. 07-896,003, filed Jun. 11, 1992, now abandoned.

FULL TEXT: 787 lines

#### ABSTRACT

A fusion protein suitable for use as a %vaccine% comprises an amino acid sequence having biological activity which is fused via an intervening hinge comprising from two to eight glycine-proline repeats to the C-terminus of sufficient of the amino acid sequence of a %B% %subunit% of an enterotoxin which is capable of ADP-ribosylation of a GTPase.

8/3,AB/9 (Item 3 from file: 654)  
DIALOG(R)File 654:US PAT.FULL.  
(c) format only 2002 The Dialog Corp. All rts. reserv.

02219474

Utility

FUSED PROTEINS COMPRISING GLYCOPROTEIN GD OF HSV-1 AND %LTB%  
[Glycoprotein of Herpes simplex virus type 1 and heat-labile enterotoxin  
%B% %subunit%; enhanced absorption for immunization through nasal mucosa]

PATENT NO.: 5,241,053  
ISSUED: August 31, 1993 (19930831)  
INVENTOR(s): Fujisawa, Yukio, Hyogo, JP (Japan)  
Hinuma, Shuji, Osaka, JP (Japan)  
Mayumi, Aki, Osaka, JP (Japan)  
Yamamoto, Tatsuo, Chiba, JP (Japan)  
ASSIGNEE(s): Takeda Chemical Industries, Ltd, (A Non-U.S. Company or  
Corporation), Osaka, JP (Japan)  
[Assignee Code(s): 82624]  
EXTRA INFO: Expired, effective August 31, 2001 (20010831), recorded in  
O.G. of November 6, 2001 (20011106)  
APPL. NO.: 7-577,915  
FILED: September 05, 1990 (19900905)

FULL TEXT: 585 lines

ABSTRACT

Disclosed are (1) a fused protein comprising heat-labile enterotoxin %B%  
%subunit% and a protein heterologous to heat-labile enterotoxin, (2) a  
recombinant DNA containing a nucleotide sequence coding for the above fused  
protein, (3) a transformant harboring the above recombinant DNA, (4) a  
method for producing the fused protein which comprises cultivating the  
above transformant, producing and accumulating the above fused protein in a  
culture, and collecting the fused protein, and (5) a method for purifying a  
fused protein comprising a herpes simplex virus surface antigen and  
heat-labile enterotoxin %B% %subunit%, which comprises cultivating a  
transformant harboring a recombinant DNA containing a nucleotide sequence  
coding for the fused protein, producing an accumulating the fused protein  
in a culture, collecting the fused protein and subjecting the collected  
fused protein to purification processes comprising cationic exchange  
chromatography and gel permeation chromatography.

8/3,AB/10 (Item 4 from file: 654)  
DIALOG(R) File 654:US PAT.FULL.  
(c) format only 2002 The Dialog Corp. All rts. reserv.

02152103

Utility

%VACCINE% PREPARATION COMPRISING A BACTERIAL TOXIN ADJUVANT

PATENT NO.: 5,182,109  
ISSUED: January 26, 1993 (19930126)  
INVENTOR(s): Tamura, Shinichi, Kanagawa, JP (Japan)  
Kurata, Takeshi, Tokyo, JP (Japan)  
Aizawa, Chikara, Kanagawa, JP (Japan)  
Nagamine, Takashi, Kanagawa, JP (Japan)  
ASSIGNEE(s): National Institute of Health, (A Non-U.S. Company or  
Corporation), Tokyo, JP (Japan)  
The Kitasato Institute, (A Non-U.S. Company or Corporation),  
Tokyo, JP (Japan)  
[Assignee Code(s): 20477; 46126]  
EXTRA INFO: Reexamined, certified October 2, 2001 (20011002)  
APPL. NO.: 7-335,678  
FILED: April 10, 1989 (19890410)  
PRIORITY: 63-86693, JP (Japan), April 8, 1988 (19880408)  
1-6759, JP (Japan), January 13, 1989 (19890113)  
FULL TEXT: 1239 lines

ABSTRACT

A %vaccine% preparation comprising in combination a %vaccine% and a toxin

or subunit thereof as an effective component. The toxin is preferably a bacterial toxin, e.g. cholera toxin, staphylococcal alpha-hemolysin, staphylococcal delta-hemolysin, vibrio thermostable direct hemolysin, pertussis toxin or ~~%E%. %coli%~~ heat-labile toxin. The toxin can be a ~~%B%~~ ~~%subunit%~~ or a part of a ~~%B%~~ ~~%subunit%~~ of a toxin. The ~~%vaccine%~~ can be ~~%influenza%~~ ~~%vaccine%~~, pertussis ~~%vaccine%~~, Japanese encephalitis ~~%vaccine%~~, mixed ~~%vaccine%~~ of pertussis, diphtheria and tetanus toxoid, hepatitis B ~~%vaccine%~~, rota ~~%vaccine%~~, measles ~~%vaccine%~~, rubella ~~%vaccine%~~, mumps ~~%vaccine%~~, combined ~~%vaccine%~~ of measles, rubella and mumps, or mycoplasma ~~%vaccine%~~. The ratio of ~~%vaccine%~~ to toxin or subunit thereof is 1:0.0001-1:10,000 (w/v). The ~~%vaccine%~~ can be intranasal ~~%vaccine%~~, or can be in injectable form, spray form or oral administration form.

8/3,AB/11 (Item 1 from file: 349)  
DIALOG(R)File 349:PCT FULLTEXT  
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00396942

GUA MUTANTS OF SHIGELLA spp. AND ~~%VACCINES%~~ CONTAINING THE SAME  
MUTANTS GUA DE SHIGELLA spp. ET ~~%VACCINS%~~ LES CONTENANT  
Patent Applicant/Assignee:

UNIVERSITY OF MARYLAND AT BALTIMORE,  
Inventor(s):

NORIEGA Fernando Ro,  
LEVINE Myron M,

Patent and Priority Information (Country, Number, Date):

Patent: WO 9737685 A1 19971016  
Application: WO 97US5954 19970409 (PCT/WO US9705954)  
Priority Application: US 96629600 19960409

Designated States: AL AM AT AU AZ BB BG BR BY CA CH CN CZ DE DK EE ES FI GB  
GE HU IL IS JP KE KG KP KR KZ LK LR LS LT LU LV MD MG MK MN MW MX NO NZ  
PL PT RO RU SD SE SG SI SK TJ TM TR TT UA UG UZ VN GH KE LS MW SD SZ UG  
AM AZ BY KG KZ MD RU TJ TM AT BE CH DE DK ES FI FR GB GR IE IT LU MC NL  
PT SE BF BJ CF CG CI CM GA GN ML MR NE SN TD TG

Publication Language: English

Fulltext Word Count: 16956

English Abstract

Gua mutants of Shigella spp., and ~~%vaccines%~~ containing the same are disclosed.

French Abstract

L'invention concerne des mutants gua de Shigella spp., et des ~~%vaccins%~~ les contenant.

8/3,AB/12 (Item 2 from file: 349)  
DIALOG(R)File 349:PCT FULLTEXT  
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00389985

ISCOM OR ISCOM-MATRIX COMPRISING A MUCUS TARGETTING SUBSTANCE AND  
OPTIONALLY, AN ANTIGEN  
COMPOSE IMMUNOSTIMULATEUR OU MATRICE DE COMPOSES IMMUNOSTIMULATEURS  
RENFERMANT UNE SUBSTANCE CIBLANT LE MUCUS ET, FACULTATIVEMENT, UN  
ANTIGENE

Patent Applicant/Assignee:

MOREIN Bror,  
LoVGREN BENGTTSSON Karin,  
EKSTROM Jill,

Inventor(s):

MOREIN Bror,  
LoVGREN BENGTTSSON Karin,  
EKSTROM Jill,

Patent and Priority Information (Country, Number, Date):

Patent: WO 9730728 A1 19970828  
Application: WO 97SE289 19970220 (PCT/WO SE9700289)  
Priority Application: SE 96647 19960221

Designated States: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES  
FI GB GE HU IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW  
MX NO NZ PL PT RO RU SD SE SG SI SK TJ TM TR TT UA UG US UZ VN YU KE LS  
MW SD SZ UG AM AZ BY KG KZ MD RU TJ TM AT BE CH DE DK ES FI FR GB GR IE  
IT LU MC NL PT SE BF BJ CF CG CI CM GA GN ML MR NE SN TD TG

Publication Language: English

Fulltext Word Count: 23379

#### English Abstract

The invention relates to immunogenic complex comprising iscom and/or iscommatrix and mucus targetting molecules for use for preparing %vaccines% and immune stimulating compositions for oral, nasal, urogenital and/or rectal administration. The immunogenic complex may comprise at least one glycoside and at least one lipid and a) at least one mucus targetting molecule chosen among substances that target lymphatic tissue and induce immune response when administrated locally on mucous membranes; and b) possibly also one passenger antigen chosen among pharmacologically immune active or immune substances that do not easily reach lymphatic tissue through mucous membranes.

#### French Abstract

Complexe immunogenique comprenant un compose immunostimulateur et/ou une matrice de compose immunostimulateurs et des molecules ciblant le mucus pour la preparation de %vaccins% et de compositions immunostimulatrices pour administration par voie orale, nasale, urogenitale et/ou rectale. Le complexe immunogenique peut renfermer au moins un glycoside et au moins un lipide ainsi que a) au moins une molecule ciblant le mucus, choisie parmi les substances qui ciblent les tissus lymphatiques et induisent une reponse immunitaire lorsqu'elles sont administrees localement sur des membranes muqueuses; et b) eventuellement un antigene passager choisi parmi les substances pharmacologiquement immunoactives ou immunes n'atteignant pas aisement les tissus lymphatiques a travers les membranes muqueuses.

8/3,AB/13 (Item 3 from file: 349)

DIALOG(R)File 349:PCT FULLTEXT

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00347536

HAPTEN-CARRIER CONJUGATES FOR USE IN DRUG-ABUSE THERAPY

CONJUGUES VECTEURS DE HAPTENE UTILISES DANS UNE THERAPIE CONTRE L'USAGE DE  
DROGUES

Patent Applicant/Assignee:

IMMULOGIC PHARMACEUTICAL CORPORATION,

Inventor(s):

SWAIN Philip A,  
SCHAD Victoria C,  
GREENSTEIN Julia L,  
EXLEY Mark A,  
FOX Barbara S,  
POWERS Stephen P,  
GEFTER Malcolm L,  
BRINER Thomas J,

Patent and Priority Information (Country, Number, Date):

Patent: WO 9630049 A2 19961003

Application: WO 96US4189 19960327 (PCT/WO US9604189)

Priority Application: US 95414971 19950331; US 95563673 19951128

Designated States: AM AT AU BB BG BR BY CA CN CZ DE DK EE ES FI GB GE HU IS  
JP KE KG KP KR KZ LK LR LT LU LV MD MG MN MW MX NO NZ PL PT RO RU SD SE  
SG SI SK TJ TM TT UA UG UZ VN KE LS MW SD SZ UG AT BE CH DE DK ES FI FR  
GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN ML MR NE SN TD TG

Publication Language: English

Fulltext Word Count: 25377

#### English Abstract

Hapten-carrier conjugates capable of eliciting anti-hapten antibodies in vivo by administering, in a therapeutic composition, are disclosed. Methods of preparing said conjugates and therapeutic compositions are

also disclosed. Where the hapten is a drug of abuse, a therapeutic composition containing the hapten-carrier conjugate is particularly useful in the treatment of drug addiction, more particularly, cocaine addiction. Passive immunization using antibodies raised against conjugates of the instant invention is also disclosed. The therapeutic composition is suitable for co-therapy with other conventional drugs.

#### French Abstract

L'invention concerne des conjugues vecteurs de haptene capables de declencher des anticorps anti-haptene in vivo par administration dans une composition therapeutique. L'invention concerne egalement des procedes de preparation desdits conjugues et desdites compositions therapeutiques. Dans les cas ou le haptene est une substance toxique, une composition therapeutique contenant le conjugue vecteur de haptene est particulierement utile dans le traitement de la toxicomanie, plus particulierement de l'accoutumance a la cocaine. De plus, l'invention concerne une immunisation passive utilisant des anticorps developpes contre des conjugues de la presente invention. La composition therapeutique est adaptee a une co-therapie avec d'autres medicaments classiques.

8/3,AB/14 (Item 4 from file: 349)

DIALOG(R) File 349:PCT FULLTEXT

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00333667

IMMUNOGENS FOR STIMULATING MUCOSAL IMMUNITY

IMMUNOGENES POUR STIMULER L'IMMUNITE DES MUQUEUSES

Patent Applicant/Assignee:

LEBENS Michael Richard,

HOLMGREN Jan Roland,

Inventor(s):

LEBENS Michael Richard,

HOLMGREN Jan Roland,

Patent and Priority Information (Country, Number, Date):

Patent: WO 9616178 A1 19960530

Application: WO 95GB2708 19951117 (PCT/WO GB9502708)

Priority Application: US 94342241 19941117

Designated States: AL AM AT AU BB BG BR BY CA CH CN CZ DE DK EE ES FI GB GE

HU IS JP KE KG KP KR KZ LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT

RO RU SD SE SG SI SK TJ TM TT UA UG UZ VN KE LS MW SD SZ UG AT BE CH DE

DK ES FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN ML MR NE SN

TD TG

Publication Language: English

Fulltext Word Count: 20012

#### English Abstract

This patent application relates to immunogens for stimulating mucosal immunity to a pathogen capable of infecting its host through contact with mammalian mucosal membranes. In particular, this invention discloses a number of polypeptides and genetic constructs that include a membrane binding polypeptide operably linked to a peptide from a pathogen. Methods are detailed throughout the claims and the specification for introducing these immunogens into a mammal to stimulate mucosal immune responses.

#### French Abstract

L'invention concerne des immunogenes pour stimuler l'immunité des muqueuses contre un pathogene capable d'infecter un hôte mammifère par contact avec les membranes muqueuses. En particulier, cette invention concerne certains polypeptides et produits de recombinaison genetique contenant un polypeptide, se fixant aux membranes en étant liés physiquement à un peptide provenant d'un pathogene. On décrit en détail dans le descriptif et dans les revendications de cette demande de brevet, des procedes permettant d'administrer ces immunogenes a des mammiferes pour stimuler la reponse immunitaire au niveau des muqueuses.

8/3,AB/15 (Item 5 from file: 349)

DIALOG(R) File 349:PCT FULLTEXT

00292152

IMMUNOLOGICAL TOLERANCE-INDUCING AGENT  
AGENT D'INDUCTION D'IMMUNOTOLERANCE

Patent Applicant/Assignee:

HOLMGREN Jan,  
CZERKINSKY Cecil,

Inventor(s):

HOLMGREN Jan,  
CZERKINSKY Cecil,

Patent and Priority Information (Country, Number, Date):

Patent: WO 9510301 A1 19950420

Application: WO 94SE941 19941007 (PCT/WO SE9400941)

Priority Application: SE 933301 19931008; US 93160106 19931130; US  
94184458 19940119

Designated States: AU CA CN JP KR AT BE CH DE DK ES FR GB GR IE IT LU MC NL  
PT SE

Publication Language: English

Fulltext Word Count: 11201

#### English Abstract

An immunological tolerance-inducing agent comprising a mucosabinding molecule linked to a specific tolerogen is disclosed. Further, a method of inducing immunological tolerance in an individual against a specific antigen, including hapten, which causes an unwanted immune response in said individual comprising administration by a mucosal route of an immunologically effective amount of an immunological tolerance-inducing agent of the invention to said individual, is described.

#### French Abstract

Agent d'induction d'immunotolerance, comportant une molecule de liaison aux muqueuses liee a un tolerogene specifique. On a egalement prevu un procede d'induction chez un individu de l'immonotolerance vis-a-vis d'un antigene specifique, notamment l'haptene, qui provoque chez ledit individu une reponse immunitaire indesirable, ledit procede consistant a administrer par voie muqueuse une quantite a efficacite immunologique d'un agent d'induction d'immunotolerance du type precite.

8/3,AB/16 (Item 6 from file: 349)

DIALOG(R)File 349:PCT FULLTEXT

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00205968

%VACCINES%

%VACCINS%

Patent Applicant/Assignee:

THE WELLCOME FOUNDATION LIMITED,  
FORD Martin James,

Inventor(s):

FORD Martin James,

Patent and Priority Information (Country, Number, Date):

Patent: WO 9203162 A1 19920305

Application: WO 91GB1426 19910823 (PCT/WO GB9101426)

Priority Application: GB 9018690 19900824

Designated States: AT BE CH DE DK ES FR GB GR IT JP LU NL SE US

Publication Language: English

Fulltext Word Count: 6582

#### English Abstract

Liposomes which have present on their surface a polypeptide capable of binding to a mucosal cell surface of a human or animal and which are substantially free of active neuraminidase are useful as %vaccines%.

#### French Abstract

Des liposomes, sur la surface desquels se trouve un polypeptide pouvant se lier avec une surface de cellule de muqueuse d'un humain ou d'un animal, et qui sont pratiquement depourvus de neuraminidase active, sont utiles comme %vaccins%.

8/3,AB/17 (Item 7 from file: 349)  
DIALOG(R)File 349:PCT FULLTEXT  
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00172910  
HEAT-LABILE TOXIN %B% %SUBUNIT% FUSION PROTEINS  
PROTEINES DE FUSION A SOUS-UNITE B DE TOXINE THERMOLABILE  
Patent Applicant/Assignee:  
UNIVERSITY OF LEICESTER,  
HIRST Timothy Raymond,  
AITKEN Robert,  
Inventor(s):  
HIRST Timothy Raymond,  
AITKEN Robert,  
Patent and Priority Information (Country, Number, Date):  
Patent: WO 9006366 A1 19900614  
Application: WO 89GB1462 19891206 (PCT/WO GB8901462)  
Priority Application: GB 8828523 19881207; GB 8913991 19890617  
Designated States: AU DK FI HU JP NO US  
Publication Language: English  
Fulltext Word Count: 5005

#### English Abstract

A fusion protein comprises subunit B of %E%. %coli% heat-labile toxin (%LTB%) having an antigen or epitope from a pathogen responsible for a human or veterinary disease fused to the carboxy-terminus of %LTB%. Such a fusion protein is obtained by culturing a host, such as a strain of %E%. %coli%, which has been transformed by a vector capable of expressing the fusion protein in that host. The fusion protein can be used as a %vaccine%.

#### French Abstract

Une proteine de fusion comprend la sous-unite B de la toxine thermolabile (%LTB%) %E%. %coli%, a la terminaison carboxy de laquelle est soude un antigene ou un epitope provenant d'un agent pathogene responsable d'une affection humaine ou animale. Une telle proteine de fusion est obtenue par mise en culture d'un hote, tel qu'une souche de %E%. %coli%, qui a ete transformee par un vecteur susceptible d'exprimer la proteine de fusion dans cet hote. Cette proteine de fusion peut s'utiliser comme %vaccin%.

8/3,AB/18 (Item 8 from file: 349)  
DIALOG(R)File 349:PCT FULLTEXT  
(c) 2002 WIPO/Univentio. All rts. reserv.

00134119  
ORAL %VACCINES%  
%VACCINS% ORAUX  
Patent Applicant/Assignee:  
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RUSSELL-JONES Gregory John,  
DE AIZPURUA Henry James,  
HOWE Peter,  
RAND Keith Norman,  
Inventor(s):  
RUSSELL-JONES Gregory John,  
DE AIZPURUA Henry James,  
HOWE Peter,  
RAND Keith Norman,  
Patent and Priority Information (Country, Number, Date):  
Patent: WO 8606635 A1 19861120  
Application: WO 86AU135 19860514 (PCT/WO AU8600135)  
Priority Application: AU 85566 19850515; AU 853104 19851025  
Designated States: AU BE CH DE DK FI FR GB IT JP KR NL NO SE SU US  
Publication Language: English  
Fulltext Word Count: 15052

## English Abstract

A complex of an immunogen with a carrier molecule and a method for presentation of the immunogen to mucosal epithelia of a host vertebrate in order to elicit a systemic, cellular, and/or mucosal immune response in the host vertebrate to the complex. The invention also provides processes for the production of the complex. Further the invention provides medicaments containing the complex as well as medicaments which additionally contain dietary molecules. The dietary molecules provides a means of selectively modulating the magnitude and/or type of immune response to the complex of the medicament. The invention provides means for inhibiting gonadal function in a mammal as well as for selectively modulating cellular immune response to a complex according to the invention.

## French Abstract

Complexe d'un immunogene presentant une molecule transporteuse et methode pour la presentation dudit immunogene a la muqueuse epitheliale d'un hote vertebre, afin d'obtenir une reponse immunitaire systematique, cellulaire et/ou mucosique au complexe chez le vertebre hote. L'invention se rapporte egalement aux procedes de production dudit complexe. En outre, l'invention fournit des medicaments contenant ledit complexe, ainsi que des medicaments qui contiennent des molecules dietetiques. Les molecules dietetiques offrent un moyen de moduler selectivement la grandeur et/ou le type de reponse immunitaire au complexe du medicament. L'invention offre un moyen d'empêcher la fonction gonadale chez les mammiferes et de moduler selectivement les reponses immunitaires cellulaires a un complexe.

8/3,AB/19 (Item 1 from file: 348)

DIALOG(R)File 348:EUROPEAN PATENTS

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00508279

%VACCINES%

IMPFSTOFFE

%VACCINS%

PATENT ASSIGNEE:

EVANS MEDICAL LIMITED, (1946510), Evans House, Regent Park, Kingston Road  
, Leatherhead, Surrey KT22 7PQ, (GB), (applicant designated states:  
AT;BE;CH;DE;DK;ES;FR;GB;GR;IT;LI;LU;NL;SE)

INVENTOR:

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Beckenham Kent BR3 3BS, (GB)

LEGAL REPRESENTATIVE:

Woods, Geoffrey Corlett et al (48721), J.A. KEMP & CO. 14 South Square  
Gray's Inn, London WC1R 5LX, (GB)

PATENT (CC, No, Kind, Date): EP 546036 A1 930616 (Basic)

EP 546036 B1 971015

WO 9203162 920305

APPLICATION (CC, No, Date): EP 91915775 910823; WO 91GB1426 910823

PRIORITY (CC, No, Date): GB 9018690 900824

DESIGNATED STATES: AT; BE; CH; DE; DK; ES; FR; GB; GR; IT; LI; LU; NL; SE

INTERNATIONAL PATENT CLASS: A61K-039/145; A61K-009/127;

NOTE:

No A-document published by EPO

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS B	(English)	9710W2	284
CLAIMS B	(German)	9710W2	287
CLAIMS B	(French)	9710W2	315
SPEC B	(English)	9710W2	4938
Total word count - document A			0
Total word count - document B			5824
Total word count - documents A + B			5824



8/3,AB/20 (Item 2 from file: 348)  
DIALOG(R)File 348:EUROPEAN PATENTS  
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00419235

Fused proteins and production thereof.  
Fusionsproteine und Herstellung davon.  
Proteines fusionnees, et leur production.

PATENT ASSIGNEE:

Takeda Chemical Industries, Ltd., (204703), 1-1, Doshomachi 4-chome,  
Chuo-ku, OSAKA, (JP), (applicant designated states:  
AT;BE;CH;DE;DK;ES;FR;GB;GR;IT;LI;LU;NL;SE)

INVENTOR:

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Hyogo 658, (JP)  
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Mayumi, Aki, 295, Ikejiri, Osaka-sayama, Osaka 589, (JP)  
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PATENT (CC, No, Kind, Date): EP 418626 A2 910327 (Basic)

EP 418626 A3 910925

EP 418626 B1 931229

APPLICATION (CC, No, Date): EP 90116878 900903;

PRIORITY (CC, No, Date): JP 89233728 890908

DESIGNATED STATES: AT; BE; CH; DE; DK; ES; FR; GB; GR; IT; LI; LU; NL; SE

INTERNATIONAL PATENT CLASS: C07K-013/00; A61K-039/108; A61K-039/295;

A61K-039/245; C12N-015/62; C12N-015/31; C12N-015/38;

ABSTRACT EP 418626 A2

Disclosed are (1) a fused protein comprising heat-labile enterotoxin %B% %subunit% and a protein heterologous to heat-labile enterotoxin, (2) a recombinant DNA containing a nucleotide sequence coding for the above fused protein, (3) a transformant harboring the above recombinant DNA, (4) a method for producing the fused protein which comprises cultivating the above transformant, producing and accumulating the above fused protein in a culture, and collecting the fused protein, and (5) a method for purifying a fused protein comprising a herpes simplex virus surface antigen and heat-labile enterotoxin %B% %subunit%, which comprises cultivating a transformant harboring a recombinant DNA containing a nucleotide sequence coding for the fused protein, producing an accumulating the fused protein in a culture, collecting the fused protein and subjecting the collected fused protein to purification processes comprising cationic exchange chromatography and gel permeation chromatography.

ABSTRACT WORD COUNT: 142

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS B	(English)	EPBBF1	1376
CLAIMS B	(German)	EPBBF1	1153
CLAIMS B	(French)	EPBBF1	1597
SPEC B	(English)	EPBBF1	5027
Total word count - document A			0
Total word count - document B			9153
Total word count - documents A + B			9153

8/3,AB/21 (Item 3 from file: 348)  
DIALOG(R)File 348:EUROPEAN PATENTS  
(c) 2001 European Patent Office. All rts. reserv.

00372607

Heat-labile toxin %B% %subunit% fusion proteins.  
Hitze-labile Toxin B-Untereinheit-Fusionsproteine.  
Proteines de fusion de la sous-unite B de la toxine labile a la chaleur.

PATENT ASSIGNEE:

UNIVERSITY OF LEICESTER, (477730), University Road, Leicester, LE1 7RH,  
(GB), .(applicant designated states:  
AT;BE;CH;DE;ES;FR;GB;GR;IT;LI;LU;NL;SE)

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LEGAL REPRESENTATIVE:

Woods, Geoffrey Corlett et al (48721), J.A. KEMP & CO. 14 South Square  
Gray's Inn, London WC1R 5EU, (GB)

PATENT (CC, No, Kind, Date): EP 372928 A2 900613 (Basic)  
EP 372928 A3 900627

APPLICATION (CC, No, Date): EP 89312713 891206;

PRIORITY (CC, No, Date): GB 8828523 881207; GB 8913991 890617

DESIGNATED STATES: AT; BE; CH; DE; ES; FR; GB; GR; IT; LI; LU; NL; SE

INTERNATIONAL PATENT CLASS: C12N-015/62; C12N-015/31; C07K-015/00;

A61K-039/116;

ABSTRACT EP 372928 A2

A fusion protein comprises subunit B of %E%. %coli% heat-labile toxin ( %LTB%) having an antigen or epitope from a pathogen responsible for a human or veterinary disease fused to the carboxy-terminus of %LTB%. Such a fusion protein is obtained by culturing a host, such as a strain of %E% . %coli%, which has been transformed by a vector capable of expressing the fusion protein in that host. The fusion protein can be used as a %vaccine%.

ABSTRACT WORD COUNT: 79

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	EPABF1	406
SPEC A	(English)	EPABF1	4265
Total word count - document A			4671
Total word count - document B			0
Total word count - documents A + B			4671

8/3,AB/22 (Item 1 from file: 16)

DIALOG(R)File 16:Gale Group PROMT(R)

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05377798 Supplier Number: 48177686

%Influenza% "Effects of Frequent Intranasal Administration of

Adjuvant-Combined %Influenza% %Vaccine% on the Protection Against Virus Infection."

Tuberculosis & Airborne Disease Weekly, pN/A

Dec 15, 1997

Language: English Record Type: Fulltext

Document Type: Newsletter; Trade

Word Count: 291

8/3,AB/23 (Item 1 from file: 636)

DIALOG(R)File 636:Gale Group Newsletter DB(TM)

(c) 2002 The Gale Group. All rts. reserv.

02807367 Supplier Number: 45695388

Conference Coverage Candidate %Vaccines% Against Flu, Chlamydia Reported

Infectious Disease Weekly, pN/A

July 31, 1995

Language: English Record Type: Fulltext

Document Type: Newsletter; Professional Trade

Word Count: 664

?

Set	Items	Description
S1	1734357	E (1W) COLI OR ESCHERICHIA (1W) COLI
S2	3458	S1 AND LTB OR HOLOTOXIN
S3	1236	S2 AND B (1W) SUBUNIT
S4	779	S3 NOT PY>1997
S5	334	S4 AND VACCIN?

? s s5 and holotoxin

>>>I/O error in file 2  
? s s4 and holotoxin

>>>I/O error in file 2  
? t s5/3,ab/1-5

>>>No matching display code(s) found in file(s): 65, 129, 332, 336, 390, 398, 447

5/3,AB/1 (Item 1 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
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11311328 BIOSIS NO.: 199800092660

Construction and characterization of versatile cloning vectors for efficient delivery of native foreign proteins to the periplasm of Escherichia coli.

AUTHOR: Jobling Michael G(a); Palmer Leslie M; Erbe Jarrod L; Holmes Randall K(a)

AUTHOR ADDRESS: (a)Dep. Microbiol., Campus Box B-175, Univ. Colo. Health Sci. Center, 4200 East Ninth Ave., Denver,\*\*USA

JOURNAL: Plasmid 38 (3):p158-173 1997

ISSN: 0147-619X

DOCUMENT TYPE: Article

RECORD TYPE: Abstract

LANGUAGE: English

ABSTRACT: Induction of the wild type cholera toxin operon (ctxAB) from multicopy clones in Escherichia coli inhibited growth and resulted in low yields of cholera toxin (CT). We found that production of wild type CT or its %B% %subunit% (CT-B) as a periplasmic protein was toxic for E. coli, but by replacing the native signal sequences of both CT-A and CT-B with the signal sequence from the %B% %subunit% of E. coli heat-labile enterotoxin LTIIb we succeeded for the first time in producing CT %holotoxin% in high yield in E. coli. Based on these findings, we designed and constructed versatile cloning vectors that use the LTIIb-B signal sequence to direct recombinant native proteins with high efficiency to the periplasm of E. coli. We confirmed the usefulness of these vectors by producing two other secreted recombinant proteins, First, using phoA from E. coli, we demonstrated that alkaline phosphatase activity was 17-fold greater when the LTIIb-B signal sequence was used than when the native leader for alkaline phosphatase was used. Second, using the pspA gene that encodes pneumococcal surface protein A from Streptococcus pneumoniae, we produced a 299-residue amino-terminal fragment of PspA in E. coli in large amounts as a soluble periplasmic protein and showed that it was immunoreactive in Western blots with antibodies against native PspA. The vectors described here will be useful for further studies on structure-function relationships and %vaccine% development with CT and PspA, and they should be valuable as general tools for delivery of other secretion-competent recombinant proteins to the periplasm in E. coli.

1997

5/3,AB/2 (Item 2 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
(c) 2001 BIOSIS. All rts. reserv.

11197767 BIOSIS NO.: 199799818912

Effects of frequent intranasal administration of adjuvant-combined influenza %vaccine% on the protection against virus infection.  
AUTHOR: Tamura Shin-Ichi(a); Yajima Ayako; Hatori Emiko; Tamura Shu; Asanuma Hideki; Suzuki Yujiro; Aizawa Chikara; Kurata Takeshi  
AUTHOR ADDRESS: (a)Dep. Pathol., National Inst. Infectious Diseases, 1-23-1 Toyama, Shinjuku-ku, Tokyo 162\*\*Japan  
JOURNAL: Vaccine 15 (16):p1784-1790 1997  
ISSN: 0264-410X  
RECORD TYPE: Abstract  
LANGUAGE: English

ABSTRACT: In previous papers, we have shown that %Escherichia% %coli% heat-labile enterotoxin %B% %subunit%, supplemented with a trace amount of the %holotoxin% (%LTB%\*) could be used as a potent adjuvant for a nasal influenza HA (haemagglutinin) %vaccine% in humans. The present study was designed to determine whether the effectiveness of a combined %LTB%\*-HA %vaccine% could be limited by preexisting immunity to %LTB% and how many times the adjuvant-combined %vaccine% could be administered intranasally without reducing its protective efficacy in BALB/c, C3H and B10 mice. The magnitude of both nasal and serum Ab responses to HA %vaccine% was correlated with the degree of protection against virus infection. Higher doses of %LTB%\*-combined %vaccine% were required for inducing high enough levels of anti-HA Ab responses to provide complete protection in low responder mice. Repeated pretreatments with %LTB%\* alone (more than six times), which provided high levels of preexisting Abs to %LTB%, inhibited the induction of anti-HA Ab responses and reduced the protective efficacy of the adjuvant-combined %vaccine%. However, the %LTB%\*-combined %vaccine% could be given repeatedly (about ten times) to mice without reducing the effectiveness of the adjuvant-combined %vaccine%. These results suggest that the %LTB%\*-combined nasal influenza %vaccine% can be given to humans once every few years when an epidemic of influenza may occur.

1997

5/3,AB/3 (Item 3 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
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11070571 BIOSIS NO.: 199799691716

Oral immunization with attenuated %vaccine% strains of *Vibrio cholerae* expressing a dodecapeptide repeat of the serine-rich *Entamoeba histolytica* protein fused to the cholera toxin %B% %subunit% induces systemic and mucosal antiamebic and anti-V. cholerae antibody responses in mice.

AUTHOR: Ryan Edward T; Butters Joan R; Zhang Tonghai; Baker Meghan A; Stanley Samuel L Jr; Calderwood Stephen B(a)

AUTHOR ADDRESS: (a)Infectious Disease Unit, Massachusetts Gen. Hosp., Boston, MA 02114\*\*USA

JOURNAL: Infection and Immunity 65 (8):p3118-3125 1997

ISSN: 0019-9567

RECORD TYPE: Abstract

LANGUAGE: English

ABSTRACT: *Entamoeba histolytica* is a significant cause of morbidity and mortality worldwide. The serine-rich *E. histolytica* protein (SREHP) is a surface-expressed trophozoite protein that includes multiple hydrophilic tandem repeats. A purified fusion protein between the dodecapeptide repeat of SREHP and cholera toxin %B% %subunit% (CTB) has previously been shown to be immunogenic in mice after oral inoculation when cholera toxin is coadministered as an immunoadjuvant. We engineered a live attenuated El Tor *Vibrio cholerae* %vaccine% strain, Peru2, to express the SREHP-12-CTB fusion protein to the supernatant from either a plasmid (Peru2 (pETR5.1)) or from a chromosomal insertion (ETR3). Vector strains were administered orally to germfree mice that were subsequently housed under nongermfree conditions; mice received one (day 0) or two (days 0 and 14) inoculations. No immunoadjuvant or cholera %holotoxin% was administered. Mice that received two inoculations of Peru2(pETR5.1) had

the most pronounced antiamebic systemic and mucosal immunologic responses. Less marked, but significant, anti-SREHP serum immunoglobulin G antibody responses were also induced in mice that received either one or two oral inoculations of strain ETR3. Anti-V. cholerae responses were also induced, as measured by the induction of serum vibriocidal antibodies and by serum and mucosal anti-CTB antibody responses. These results suggest that V. cholerae vector strains can be successful delivery vehicles for the SREHP-12-CTB fusion protein, to induce mucosal and systemic antiamebic and anti-V cholerae immune responses. The magnitude of these responses is proportional to the amount of SREHP-12-CTB produced by the vector strain.

1997

5/3,AB/4 (Item 4 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
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10981631 BIOSIS NO.: 199799602776

Toxicity and immunogenicity of a verotoxin 1 mutant with reduced globotriaosylceramide receptor binding in rabbits.

AUTHOR: Bast Darrin J; Brunton James L; Karmali Mohamed A; Richardson Susan E(a)

AUTHOR ADDRESS: (a)Division Microbiol., Dep. Paediatric Lab. Med., Hosp. Sick Children, 555 University Ave., Toront\*\*Canada

JOURNAL: Infection and Immunity 65 (6):p2019-2028 1997

ISSN: 0019-9567

RECORD TYPE: Abstract

LANGUAGE: English

ABSTRACT: The verotoxins (VT1 and VT2), produced by strains of enterohemorrhagic Escherichia coli, have been implicated in the pathogenesis of hemorrhagic colitis and the hemolytic uremic syndrome. To better understand the role of globotriaosylceramide (Gb-3) receptor binding by the verotoxins in disease production, we examined the clinicopathologic effects of an intravenously (i.v.) administered verotoxin 1 mutant %holotoxin% (Phe30Ala) in rabbits. The substitution of alanine for phenylalanine 30 in the VT1 %B% %subunit% has been shown previously to reduce both Gb-3 binding affinity and capacity in vitro. This reduction in receptor binding corresponded to a 10<sup>-5</sup>-fold reduction in the toxic activity of VT1 on a Vero cell monolayer. In this study, purified 125I-labeled Phe30Ala was administered i.v. to rabbits to determine its specific distribution in rabbit tissues. In contrast to the rapid elimination of i.v. administered 125I-VT1 from the bloodstream, 125I-Phe30Ala had a 52-fold-longer half-life in serum and failed to localize preferentially in the gastrointestinal tract and central nervous system (CNS). Rabbits challenged with Phe30Ala at a dose equivalent to 10 times the 50% lethal dose (LD-50) of VT1 showed no visible clinical symptoms typical of VT effect after 7 days. Administration of Phe30Ala at a dose equivalent to 100 times the LD-50 of VT1, however, caused both clinical and histopathologic features indistinguishable from VT1 toxemia in rabbits, although the onset of symptoms was delayed. Rabbits were immunized with Phe30Ala and challenged i.v. with either 125I-VT1 or 125I-VT2. The specific uptake of 125I-VT1 in the gastrointestinal tract and CNS was totally inhibited in Phe30Ala immune rabbits. Only a partial decrease in target organ uptake was observed in Phe30Ala immune rabbits challenged with 125I-VT2. From this study, we conclude that Gb<sub>3</sub> binding is responsible for target organ localization of VT1 and disease production in the rabbit. The ability of Phe30Ala to induce both strong antibody and protective responses against VT1 suggests that VT mutants with reduced receptor binding properties may be useful in %vaccine% strategies. A further reduction in the toxicity of Phe30Ala would be required for its use as a natural toxoid to protect against human verotoxigenic E. coli infections.

1997

5/3,AB/5 (Item 5 from file: 5)  
DIALOG(R)File 5:BIOSIS Previews(R)  
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10793341 BIOSIS NO.: 199799414486

Immunogenicity of a fusion protein linking the beta subunit carboxyl terminal peptide (CTP) of human chorionic gonadotropin to the %B% %subunit% of %Escherichia% %coli% heat-labile enterotoxin (%LTB%).

AUTHOR: Rock Edwin P(a); Reich Karl A; Lyu Dennis M; Hovi Marianne; Hardy Jonathan; Schoolnik Gary K; Stocker Bruce A D; Stevens Vernon

AUTHOR ADDRESS: (a)Dep. Microbiol. Immunol., Stanford Univ. Sch. Med., Stanford, CA 94305-5402\*\*USA


JOURNAL: Vaccine 14 (16):p1560-1568 1996

ISSN: 0264-410X

RECORD TYPE: Abstract

LANGUAGE: English

ABSTRACT: Human chorionic gonadotropin (hCG) is currently under investigation as an antigenic target in both anti-cancer and anti-fertility %vaccines%. Formulations studied to date show promise in clinical trials for both applications yet are expensive to produce and require frequent administration in order to maintain an effective antibody titer. We have engineered a fusion protein consisting of %Escherichia% %coli% heat-labile enterotoxin subunit B (%LTB%) genetically linked at its C terminus via a nine amino acid linker to the 37 amino acid carboxyl terminal peptide (CTP) of the hCG beta chain. This %LTB%-CTP fusion protein is stably expressed in bacteria and forms pentamers of full-length protein subunits. Purified %LTB%-CTP protein induces hCG-specific antibodies in mice without additional adjuvants.



1996

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Set	Items	Description
S1	1734357	E (1W) COLI OR ESCHERICHIA (1W) COLI
S2	3458	S1 AND LTB OR HOLOTOXIN
S3	1236	S2 AND B (1W) SUBUNIT
S4	779	S3 NOT PY>1997
S5	334	S4 AND VACCIN?
S6	559	S1 AND S4
?		

Set	Items	Description
S1	1734455	E (1W) COLI OR ESCHERICHIA (1W) COLI
S2	3458	S1 AND LTB OR HOLOTOXIN
S3	1236	S2 AND B (1W) SUBUNIT
S4	779	S3 NOT PY>1997
S5	334	S4 AND VACCIN?
S6	157	S5 AND LTB
S7	71	RD (unique items)
S8	23	S7 AND INFLUENZA

? t s7/3,ab/1-71

>>>No matching display code(s) found in file(s): 65, 129, 332, 336, 390, 398, 447

7/3,AB/1 (Item 1 from file: 5)  
 DIALOG(R)File 5:BIOSIS Previews(R)  
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11197767 BIOSIS NO.: 199799818912  
 Effects of frequent intranasal administration of adjuvant-combined influenza %vaccine% on the protection against virus infection.  
 AUTHOR: Tamura Shin-Ichi(a); Yajima Ayako; Hatori Emiko; Tamura Shu; Asanuma Hideki; Suzuki Yujiro; Aizawa Chikara; Kurata Takeshi  
 AUTHOR ADDRESS: (a)Dep. Pathol., National Inst. Infectious Diseases, 1-23-1 Toyama, Shinjuku-ku, Tokyo 162\*\*Japan  
 JOURNAL: Vaccine 15 (16):p1784-1790 1997  
 ISSN: 0264-410X  
 RECORD TYPE: Abstract  
 LANGUAGE: English

ABSTRACT: In previous papers, we have shown that %Escherichia% %coli% heat-labile enterotoxin %B% %subunit%, supplemented with a trace amount of the %holotoxin% (%LTB%\*) could be used as a potent adjuvant for a nasal influenza HA (haemagglutinin) %vaccine% in humans. The present study was designed to determine whether the effectiveness of a combined %LTB%\*-HA %vaccine% could be limited by preexisting immunity to %LTB% and how many times the adjuvant-combined %vaccine% could be administered intranasally without reducing its protective efficacy in BALB/c, C3H and B10 mice. The magnitude of both nasal and serum Ab responses to HA %vaccine% was correlated with the degree of protection against virus infection. Higher doses of %LTB%\*-combined %vaccine% were required for inducing high enough levels of anti-HA Ab responses to provide complete protection in low responder mice. Repeated pretreatments with %LTB%\* alone (more than six times), which provided high levels of preexisting ~~abs to %LTB%, inhibited~~ the induction of anti-HA Ab responses and reduced the protective efficacy of the adjuvant-combined %vaccine%. However, the %LTB%\*-combined %vaccine% could be given repeatedly (about ten times) to mice without reducing the effectiveness of the adjuvant-combined %vaccine%. These results suggest that the %LTB%\*-combined nasal influenza %vaccine% can be given to humans once every few years when an epidemic of influenza may occur.

1997

7/3,AB/2 (Item 2 from file: 5)  
 DIALOG(R)File 5:BIOSIS Previews(R)  
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10793341 BIOSIS NO.: 199799414486  
 Immunogenicity of a fusion protein linking the beta subunit carboxyl terminal peptide (CTP) of human chorionic gonadotropin to the %B% %subunit% of %Escherichia% %coli% heat-labile enterotoxin (%LTB%).  
 AUTHOR: Rock Edwin P(a); Reich Karl A; Lyu Dennis M; Hovi Marianne; Hardy Jonathan; Schoolnik Gary K; Stocker Bruce A D; Stevens Vernon  
 AUTHOR ADDRESS: (a)Dep. Microbiol. Immunol., Stanford Univ. Sch. Med., Stanford, CA 94305-5402\*\*USA  
 JOURNAL: Vaccine 14 (16):p1560-1568 1996



ISSN: 0264-410X  
RECORD TYPE: Abstract  
LANGUAGE: English

ABSTRACT: Human chorionic gonadotropin (hCG) is currently under investigation as an antigenic target in both anti-cancer and anti-fertility %vaccines%. Formulations studied to date show promise in clinical trials for both applications yet are expensive to produce and require frequent administration in order to maintain an effective antibody titer. We have engineered a fusion protein consisting of %Escherichia% %coli% heat-labile enterotoxin subunit B (%LTB%) genetically linked at its C terminus via a nine amino acid linker to the 37 amino acid carboxyl terminal peptide (CTP) of the hCG beta chain. This %LTB%-CTP fusion protein is stably expressed in bacteria and forms pentamers of full-length protein subunits. Purified %LTB%-CTP protein induces hCG-specific antibodies in mice without additional adjuvants.

1996

7/3,AB/3 (Item 3 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
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10579126 BIOSIS NO.: 199699200271  
Construction, purification and immunogenicity of antigen-antibody-%LTB% complexes.  
AUTHOR: Green E A; Botting C; Webb H M; Hirst T R; Randall R E(a)  
AUTHOR ADDRESS: (a)Sch. Biological Med. Sciences, Irvine Building, North Street, Univ. St. Andrews, St. Andrews, Fi\*\*UK  
JOURNAL: Vaccine 14 (10):p949-958 1996  
ISSN: 0264-410X  
DOCUMENT TYPE: Article  
RECORD TYPE: Abstract  
LANGUAGE: English

ABSTRACT: An oligonucleotide, encoding a short epitope peptide tag, termed Pk, was inserted at the 3'-end of the gene coding %B%-subunit% of %Escherichia% %coli% heat-labile enterotoxin (%LTB%). The presence of the Pk epitope on %LTB%-Pk was used to construct novel macromolecular assemblies comprising %LTB%-Pk, an anti-Pk mAb, (mAb SV5-P-k) and Pk-linked recombinant SIV proteins. The 1:1:1 stoichiometry of such complexes was ensured by binding %LTB%-Pk to one arm of mAb SV5-P-k and an SIV-Pk antigen to the other arm of the antibody. Such SIV-mAb-%LTB% macromolecular complexes bound to GM1-ganglioside in vitro, and when immunized systemically into mice were highly immunogenic, inducing both humoral and cell-mediated responses to the recombinant SIV antigens.

1996

7/3,AB/4 (Item 4 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
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10419597 BIOSIS NO.: 199699040742  
Synthesis of hybrid molecules between heat-labile enterotoxin and cholera toxin B subunits: Potential for use in a broad-spectrum %vaccine%.  
AUTHOR: Lebens M(a); Shahabi V; Backstrom M; Houze T; Lindblad M; Holmgren J  
AUTHOR ADDRESS: (a)Dep. Med. Microbiol. Immunol., Univ. Goteborg, Guldhedsgatan 10A, S-413 46 Goteborg\*\*Sweden  
JOURNAL: Infection and Immunity 64 (6):p2144-2150 1996  
ISSN: 0019-9567  
DOCUMENT TYPE: Article  
RECORD TYPE: Abstract  
LANGUAGE: English

ABSTRACT: Three variants of the cholera toxin %B% %subunit% (CTB) were

generated by site-specific mutagenesis in which regions of the mature protein were altered to the composition found at the corresponding positions of the closely related B subunit of the heat-labile enterotoxin of enterotoxigenic *Escherichia coli* (LTB). The mutant proteins were expressed in *Vibrio cholerae* and purified from the growth medium. In the first of the mutant proteins, the first 25 amino acids corresponded to the sequence found in LTB, and in the second, changes were made at positions 94 and 95 of the mature protein. The third mutant protein combined the changes made in the first two. Analysis of the immunological properties of these novel proteins by using monoclonal antibodies and absorbed polyclonal antiserum demonstrated that they had acquired LTB-specific epitopes. Immunizations with the mutant proteins resulted in antisera containing LTB-specific as well as CTB-specific and crossreactive antibodies. The sera were also found to be more strongly cross-reactive in the *in vitro* neutralization of both cholera toxin and heat-labile enterotoxin than were antisera raised against either CTB or LTB. The results suggest that such hybrid CTB-LTB proteins may be useful in a broad-spectrum vaccine against enterotoxin-induced diarrhea.

1996

7/3,AB/5 (Item 5 from file: 5)  
DIALOG(R)File 5:BIOSIS Previews(R)  
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10385104 BIOSIS NO.: 199699006249

Mucosal immunogenicity of the *Escherichia coli* heat-labile enterotoxin: role of the A subunit.

AUTHOR: De Haan Lolke; Holtrop Marijke; Verweij Willem R; Agsteribbe Etienne; Wilschut Jan(a)

AUTHOR ADDRESS: (a)Dep. Physiol. Chem., Groningen Inst. Drug Studies (GIDS), University Groningen, Bloemsingel 10, \*\*Netherlands

JOURNAL: Vaccine 14 (4):p260-266 1996

ISSN: 0264-410X

DOCUMENT TYPE: Article

RECORD TYPE: Abstract

LANGUAGE: English

ABSTRACT: The *Escherichia coli* heat-labile enterotoxin (LT) is a potent mucosal immunogen, inducing high secretory as well as systemic antibody responses upon oral or intranasal (i.n.) administration. In addition, LT has the capacity to act as an adjuvant in antibody responses against coadministered other antigens. To investigate the role of the individual subunits of LT in the mucosal immunogenicity and adjuvanticity of LT, the LT holotoxin and the non-toxic B subunit (LTB) were cloned separately and purified from overproducing *E. coli* cultures. Mice were immunized i.n. with the recombinant LT, LTB and combinations of the two and the induction of LTB-specific serum IgG and IgA as well as mucosal S-IgA was monitored. Intranasal administration of 2 µg LTB by itself induced a moderate systemic and a low mucosal antibody response, the latter being restricted to the site of immunization. However, addition of a trace amount (50 ng) of LT holotoxin to LTB strongly stimulated both serum antibody and mucosal S-IgA responses to LTB: the antibody levels induced by 2 µg LTB supplemented with 50 ng LT were similar to those seen after immunization with 2.9 µg of the LT holotoxin alone (representing an amount of 2 µg LTB). Furthermore, immunization with LT-supplemented LTB or with LT holotoxin alone, but not immunization with LTB alone, induced an S-IgA response in distant mucosal tissues including the lung, intestine and the urogenital system. Nicking of the LTA chain with trypsin did not enhance the immunogenicity of LT. These results indicate that, although the LTA chain plays an important role in the mucosal immunogenicity of LT including priming of the common mucosal immune system, extremely low amounts of the LT holotoxin suffice for the induction of high antibody responses to LTB, the trace LT and LTB acting in a synergistic fashion.

1996

containing a trace amount of the %holotoxin% (LT) in inducing antibody responses among volunteers, which was conducted during the winter season of 1993-1994, is reported. A trivalent inactivated %vaccine%, composed of A/Yamagata/32/89 (H1N1), A/Kitakyusyu/159/93 (H3N2) and B/Bangkok/163/90 influenza virus strains, was used alone or together with the adjuvant, recombinant %LTB% supplemented with 0.5% recombinant LT (%LTB%). The volunteers were divided into two groups: 73 volunteers (mean age 35.0 +/- 12.0 years) inoculated intranasally (i.n.) with %LTB%-combined %vaccine% and 49 volunteers (37.9 +/- 11.3) inoculated i.n. with the %vaccine% alone. %Vaccination% was done twice 4 weeks apart. Salivary secretory IgA and serum hemagglutination-inhibiting (HI) antibodies were measured before and 8 weeks after the primary %vaccination%. For the sake of convenience, more than a 1.4-fold rise in IgA antibody response (units of specific IgA antibody per mu-g of total IgA) and a fourfold or greater rise in HI antibody titer after %vaccination% were regarded as a positive antibody response. Thirty-seven (50.3%) and 36 (49.3%) of the 73 %vaccinees%, respectively, given the nasal %LTB%-combined %vaccine% showed positive IgA and HI antibody responses to one or more of the three %vaccine% strains. In comparison, positive antibody responses in the group given %vaccine% alone were 32.7% for IgA and 30.6% for HI antibody. There was a significant difference between these two groups. These results suggest that the nasal %LTB%-combined %vaccine% could enhance the production of higher levels not only of serum HI antibody but IgA antibodies in the respiratory tract than do the nasal %vaccine% alone.

1996

7/3,AB/8 (Item 8 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
(c) 2001 BIOSIS. All rts. reserv.

09715531 BIOSIS NO.: 199598170449

High cell density fermentation of recombinant *Vibrio cholerae* for the production of %B% %subunit% of %Escherichia% %coli% enterotoxin.

AUTHOR: Panda Amulya K(a); Ghorpade Anuja; Mukhopadhyay Asok; Talwar G P; Garg L C

AUTHOR ADDRESS: (a)Dep. Chem.Eng., Univ. Calif., Berkeley, CA 94720\*\*USA

JOURNAL: Biotechnology and Bioengineering 45 (3):p245-250 1995

ISSN: 0006-3592

DOCUMENT TYPE: Article

RECORD TYPE: Abstract

LANGUAGE: English

ABSTRACT: High cell density fermentation studies were performed to produce the %B% %subunit% of %Escherichia% %coli% heat-labile enterotoxin (%LTB%) from a *Vibrio cholerae* culture that carries a recombinant plasmid with an ampicillin resistance gene, tac promoter, and the gene encoding %LTB%. Upon induction with isopropyl-beta-D-thiogalactopyranoside (IPTG) the culture secreted the protein into the extracellular milieu. Fed-batch fermentation with stepwise addition of a total of 5 mM of IPTG during the active growth phase of the organism resulted in the production of 400 mg/L of %LTB% in 9 h and a cell optical density (OD) of 24. The %LTB% was purified to homogeneity with 70% recovery from the fermentation broth and was found to be chemically and biologically identical to the native protein by N-terminal amino acid sequencing and receptor binding assay.

1995

7/3,AB/9 (Item 9 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
(c) 2001 BIOSIS. All rts. reserv.

09489174 BIOSIS NO.: 199497497544

%Escherichia% %coli% heat-labile enterotoxin B subunits supplemented with a trace amounts of the %holotoxin% as an adjuvant for nasal influenza %vaccine%.

AUTHOR: Tamura Shin-Ichi(a); Asanuma Hideki; Tomita Toshio; Komase Katsuhiro; Kawahara Kazuyoshi; Danbara Hirofumi; Hattori Nobuyuki;

Watanabe Kouji; Suzuki Yujiro; al  
AUTHOR ADDRESS: (a)Dep. Pathol., NIH, 1-23-1 Toyama, Shinjuku-ku, Tokyo 162  
\*\*Japan  
JOURNAL: Vaccine 12 (12):p1083-1089 1994  
ISSN: 0264-410X  
DOCUMENT TYPE: Article  
RECORD TYPE: Abstract  
LANGUAGE: English

ABSTRACT: %Escherichia% %coli% heat-labile enterotoxin %B% %subunit% (%LTB%  
) (2 mu-g), supplemented with a trace amount of the %holotoxin% (LT)  
(0.02-20 ng), was examined for the adjuvant effect on antibody (Ab)  
responses against influenza inactivated haemagglutinin (HA) %vaccine% in  
Balb/c mice. Each mouse received a primary intranasal (i.n.) inoculation  
with the %vaccine% (1.5 mu-g), prepared from PR8 (H1N1) virus, together  
with LT-containing %LTB% and in 4 weeks a second i.n. inoculation of the  
%vaccine% alone. The inoculation of the %vaccine% with the LT-containing  
%LTB% induced significantly high primary and secondary anti-HA IgA and  
IgG Ab responses in the nasal wash and the serum, while the %vaccine%  
with %LTB% or less than 2 ng of LT induced little response. The  
synergistic adjuvant effect was maximal in the concentration of %LTB%  
supplemented with 0.2-2 ng of LT. Under these conditions, the augmented  
IgA and IgG Ab responses, which are cross-protective to PR8 HA molecules,  
provided complete cross-protection against PR8 virus challenge in mice  
immunized with heterologous %vaccine% within the same subtype. These  
results suggest that %LTB% containing a trace amount of LT can be used as  
a potent adjuvant for nasal %vaccination% of humans against influenza.

1994

7/3,AB/10 (Item 10 from file: 5)  
DIALOG(R)File 5:BIOSIS Previews(R)  
(c) 2001 BIOSIS. All rts. reserv.

09235508 BIOSIS NO.: 199497243878

Synergistic action of cholera toxin %B% %subunit% (and %Escherichia% %coli%  
heat-labile toxin %B% %subunit%) and a trace amount of cholera whole  
toxin as an adjuvant for nasal influenza %vaccine%.

AUTHOR: Tamura Shin-Ichi(a); Yamanaka Aya; Shimohara Miyuki; Tomita Toshio;  
Komase Katsuhiro; Tsuda Yusuke; Suzuki Yujiro; Nagamine Takashi; Kawahara  
Kazuyoshi; Danbara Hirofumi; Aizawa Chikara; Oya Akira; Kurata Takeshi

AUTHOR ADDRESS: (a)Dep. Pathol., Natl. Inst. Health, 1-23-1 Toyama,  
Shinjuku-ku, Tokyo 162\*\*Japan

JOURNAL: Vaccine 12 (5):p419-426 1994  
ISSN: 0264-410X  
DOCUMENT TYPE: Article  
RECORD TYPE: Abstract  
LANGUAGE: English

ABSTRACT: Cholera toxin %B% %subunit% (CTB) and %Escherichia% %coli%  
heat-labile toxin (%LTB%) (2 mu-g), each supplemented with a trace amount  
of cholera toxin (CT) (0.02-20 ng), were examined for the adjuvant effect  
on antibody (Ab) response against influenza inactivated HA  
(hemagglutinin) %vaccine% in Balb/c mice. Each mouse received a primary  
intranasal (i.n.) inoculation of the %vaccine% (1.5 mu-g) and the  
CT-containing CTB and in 4 weeks a second i.n. inoculation of the  
%vaccine% alone. The primary inoculation of the %vaccine% with CTB alone  
did not induce either anti-HA IgA or IgG Ab response, or  
hemagglutination-inhibition Ab responses in the serum. The %vaccine% with  
less than 2 ng of CT also failed to induce Ab response. On the other  
hand, the %vaccine% with CT-containing CTB induced a high Ah response,  
which increased depending on the CT dose. Moreover, the second %vaccine%  
induced a response more than ten times higher than the primary one and  
the response increased depending on the CT dose. Similar enhancement was  
found in the local anti-HA IgA Ab response in the nasal wash. Such  
synergistic effects were observed also between %LTB% and CT. The amount  
of Ab produced by the synergism was considered to be enough to protect  
against virus infection. These results suggest that CTB (or %LTB%)

are known to bind. All of the proteins that were active in oral immunization are known to possess "lectin or lectin-like" binding activities. It is therefore proposed that these molecules are able to bind to glycolipids and glycoproteins on the intestinal mucosa and to stimulate these cells to transport the proteins into the systemic circulation, thereby eliciting a systemic immune response. Molecules that did not possess this binding activity were unable to elicit significant responses at the doses tested.

1988

7/3,AB/13 (Item 1 from file: 155)  
DIALOG(R) File 155:MEDLINE(R)

09318328 97218605 PMID: 9066042

Suppression of delayed-type hypersensitivity and IgE antibody responses to ovalbumin by intranasal administration of *Escherichia coli* heat-labile enterotoxin B subunit-conjugated ovalbumin.

Tamura S; Hatori E; Tsuruhara T; Aizawa C; Kurata T

Department of Pathology, National Institute of Health, Tokyo, Japan.

Vaccine (ENGLAND) Feb 1997, 15 (2) p225-9, ISSN 0264-410X

Journal Code: X60

Languages: ENGLISH

Document type: Journal Article

Record type: Completed

Oral administration of a small amount of antigen conjugated cholera toxin B subunit is known to induce tolerance to the antigen. In the present experiments, whether nasal administration of allergen conjugated to *Escherichia coli* heat-labile toxin B subunit (LTB) induced tolerance was examined in BALB/c mice. A single administration of a small amount of LTB-coupled ovalbumin (OVA) suppressed the induction of delayed-type hypersensitivity and IgE antibody responses to OVA which was administered parenterally after nasal administration of LTB-coupled OVA. The antigen-specific suppression was abrogated by the addition of the holotoxin to LTB-coupled OVA. The suppression, induced by nasal administration with a small amount of allergen conjugated to a mucosa-binding molecule, may be applicable for preventing the development of allergy.

7/3,AB/14 (Item 2 from file: 155)  
DIALOG(R) File 155:MEDLINE(R)

09304334 97231796 PMID: 9077073

Efficacy of nasal influenza vaccine combined with *Escherichia coli* heat-labile enterotoxin B subunit containing a trace amount of the holotoxin in healthy volunteers]

Hashigucci K; Tamura S; Kurata T; Kamiya H; Ishidate T

E.N.T. Department, Kitasato Institute Hospital.

Kansenshogaku zasshi (JAPAN) Feb 1997, 71 (2) p153-61, ISSN 0387-5911 Journal Code: IJR

Languages: JAPANESE

Document type: Clinical Trial; Controlled Clinical Trial; Journal Article

Record type: Completed

We conducted a field trial to evaluate the efficacy of nasal influenza vaccine combined with *Escherichia coli* heat-labile enterotoxin B subunit (LTB) containing a trace amount of the holotoxin (LT) in preventing or attenuating influenza among volunteers during the winter season of 1994-1995. A trivalent inactivated influenza vaccine, composed of A/Yamagata/32/89 (H1N1), A/Kitakyusyu/159/93 (H2N2) and B/Mie/1/93 influenza virus strains, was administered intranasally together with recombinant LTB containing 1% recombinant LT (LTB\*). Vaccination was done twice 4 weeks apart. Salivary secretory IgA and serum HI antibodies were measured before and 8 weeks after the primary vaccination. Thirty-two volunteers were enrolled in this study; 18 volunteers (mean age 37.7 +/- 11.3) were given LTB\*-combined vaccine and 14 volunteers (mean age 44.1 +/- 11.3) given placebo. Outbreaks of H3N2 subtype and B type virus were observed during this study period. Six (42.9%) of the 14

volunteers in the placebo group and 3 (16.7%) of the 18 receiving %LTB%\*-combined %vaccine% contracted influenza. There was no statistically significant difference between the two groups, because the number of subjects was small. Higher percentage of positive IgA and HI antibody responses among %vaccines% given %vaccine% with %LTB%\* were observed as compared with those in the placebo group. Positive IgA antibody response to all %vaccine% strains were observed in 46.7% (7/15) of the %vaccine% group. On the other hand, none of the placebo group showed positive IgA antibody response to all %vaccine% strains. These results suggest that nasal influenza %vaccine% with %LTB%\* appears to be effective in preventing influenza.

7/3,AB/15 (Item 3 from file: 155)  
DIALOG(R) File 155:MEDLINE(R)

07073985 93266307 PMID: 8388365

Intranasal immunization against herpes simplex virus infection by using a recombinant glycoprotein D fused with immunomodulating proteins, the %B% %subunit% of %Escherichia% %coli% heat-labile enterotoxin and interleukin-2.

Hazama M; Mayumi-Aono A; Miyazaki T; Hinuma S; Fujisawa Y  
Biology Research Laboratory, Takeda Chemical Industries, Ltd., Osaka, Japan.

Immunology (ENGLAND) Apr 1993, 78 (4) p643-9, ISSN 0019-2805

Journal Code: GH7

Languages: ENGLISH

Document type: Journal Article

Record type: Completed

To establish a novel strategy of mucosal immunization against herpes simplex virus type 1 (HSV-1) infection, we studied the immune responses elicited by intranasal immunization with several forms of a recombinant glycoprotein D (gD) of HSV-1. A truncated gD (t-gD) co-administered with heat-labile enterotoxin %B% %subunit% (%LTB%) from %Escherichia% %coli% induced both a mucosal immune response involving secretion of anti-gD IgA and serum IgG production. The levels of these responses are comparable to those in mice which have recovered from intranasal HSV-1 infections. The fusion protein (t-gD-%LTB%), consisting of t-gD and %LTB%, induced the responses more efficiently than did co-administration of t-gD and %LTB%, although GM1 ganglioside binding activity was significantly reduced in t-gD-%LTB%. We found that another fusion protein, consisting of t-gD and human interleukin-2 (t-gD-IL-2), also elicited antibody responses comparable to those induced by t-gD-%LTB%. Immunity acquired by intranasal immunization with t-gD-IL-2 protected mice from intraperitoneal HSV-1 infections, whereas t-gD-%LTB% or t-gD alone failed to provide protection against infection. Even in a mouse strain that responded highly to subcutaneously administered gD, intranasally administered t-gD did not elicit antibody responses. The lack of response to gD was clearly abrogated by co-administration with IL-2, and administration of t-gD-IL-2 induced an excellent level of antibody responses in this strain. These results suggest that the IL-2 fusion strategy yields a new type of mucosal immunization, the mechanism of which differs from that speculated for the mucosal adjuvant activity of %LTB%.

7/3,AB/16 (Item 1 from file: 34)  
DIALOG(R) File 34:SciSearch(R) Cited Ref Sci  
(c) 2002 Inst for Sci Info. All rts. reserv.

05375594 Genuine Article#: VU635 Number of References: 27

Title: MUTANTS OF THE %ESCHERICHIA%-%COLI% HEAT-LABILE ENTEROTOXIN WITH REDUCED ADP-RIBOSYLATION ACTIVITY OR NO ACTIVITY RETAIN THE IMMUNOGENIC PROPERTIES OF THE NATIVE %HOLOTOXIN% (Abstract Available)

Author(s): DEHAAN L; VERWEIJ WR; FEIL IK; LIJNEMA TH; HOL WGJ; AGSTERIBBE E ; WILSCHUT J

Corporate Source: UNIV GRONINGEN, GRONINGEN INST DRUG STUDIES, DEPTPHYSIOL CHEM, ANTONIUS DEUTSINGLAAN 1/NL-9713 AV GRONINGEN//NETHERLANDS/; UNIV GRONINGEN, GRONINGEN INST DRUG STUDIES, DEPTPHYSIOL CHEM/NL-9713 AV GRONINGEN//NETHERLANDS/; UNIV WASHINGTON, SCH MED, HOWARD HUGHES MED

terminal peptide (CTP) of human chorionic gonadotropin to the B subunit of Escherichia coli heat-labile enterotoxin (LTB)

Rock E.P.; Reich K.A.; Lyu D.M.; Hovi M.; Hardy J.; Schoolnik G.K.; Stocker B.A.D.; Stevens V.

E.P. Rock, Department Microbiol./Immunobiology, Stanford University, School of Medicine, Stanford, CA 94305-5402 United States

Vaccine ( VACCINE ) (United Kingdom) 1996, 14/16 (1560-1568)

CODEN: VACCD ISSN: 0264-410X

PUBLISHER ITEM IDENTIFIER: S0264410X96000461

DOCUMENT TYPE: Journal; Article

LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

NUMBER OF REFERENCES: 46

Human chorionic gonadotropin (hCG) is currently under investigation as an antigenic target in both anti-cancer and anti-fertility vaccines. Formulations studied to date show promise in clinical trials for both applications yet are expensive to produce and require frequent administration in order to maintain an effective antibody titer. We have engineered a fusion protein consisting of Escherichia coli heat-labile enterotoxin subunit B (LTB) genetically linked at its C terminus via a nine amino acid linker to the 37 amino acid carboxyl terminal peptide (CTP) of the hCG beta chain. This LTB-CTP fusion protein is stably expressed in bacteria and forms pentamers of full-length protein subunits. purified LTB-CTP protein induces hCG-specific antibodies in mice without additional adjuvants.

7/3,AB/19 (Item 2 from file: 73)

DIALOG(R)File 73:EMBASE

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06584945 EMBASE No: 1996249567

Construction, purification and immunogenicity of antigen-antibody-LTB complexes

Green E.A.; Botting C.; Webb H.M.; Hirst T.R.; Randall R.E.

School Biological/Medical Sciences, The Irvine Building, University St Andrews, North Street, Fife KY16 9AL United Kingdom

Vaccine ( VACCINE ) (United Kingdom) 1996, 14/10 (949-958)

CODEN: VACCD ISSN: 0264-410X

DOCUMENT TYPE: Journal; Article

LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

An oligonucleotide, encoding a short epitope peptide tag, termed Pk, was inserted at the 3'-end of the gene coding B subunit of Escherichia coli heat-labile enterotoxin (LTB). The presence of the Pk epitope on LTB-PK was used to construct novel macromolecular assemblies comprising LTB-Pk, an anti-Pk mAb, (mAb SV5-P-k) and Pk-linked recombinant SIV proteins. The 1:1:1 stoichiometry of such complexes was ensured by binding LTB-Pk to one arm of mAb SVS-P-k and an SIV-Pk antigen to the other arm of the antibody. Such SIV-mAb-LTB macromolecular complexes bound to GM1-ganglioside in vitro, and when immunized systemically into mice were highly immunogenic, inducing both humoral and cell-mediated responses to the recombinant SIV antigens.

7/3,AB/20 (Item 1 from file: 399)

DIALOG(R)File 399:CA SEARCH(R)

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113072426 CA: 113(9)72426t JOURNAL

Non-antibiotic resistant enterotoxigenic Escherichia coli (ETEC) vaccine strain expressing K88ac and LT-B antigens

AUTHOR(S): Huang, Peitang; Cheng, Jun; Li, Fengsheng; Xu, Xiang; Zhang, Qunwei; Chen, Tianmi; Huang, Cuifen

LOCATION: Inst. Biotechnol., Acad. Mil. Med. Sci., Beijing, Peop. Rep. China,

JOURNAL: Shengwu Gongcheng Xuebao DATE: 1990 VOLUME: 6 NUMBER: 1

PAGES: 11-17 CODEN: SGXUED ISSN: 1000-3061 LANGUAGE: Chinese

7/3,AB/21 (Item 2 from file: 399)  
DIALOG(R)File 399:CA SEARCH(R)  
(c) 2001 AMERICAN CHEMICAL SOCIETY. All rts. reserv.

104143168 CA: 104(17)143168n PATENT  
E. coli LT-B enterotoxin subunit  
INVENTOR(AUTHOR): Clements, John D.  
LOCATION: USA  
ASSIGNEE: Praxis Biologics, Inc.  
PATENT: European Pat. Appl. ; EP 168322 A2 DATE: 860115  
APPLICATION: EP 85401380 (850708) \*US 628873 (840709)  
PAGES: 74 pp. CODEN: EPXXDW LANGUAGE: English CLASS: C12N-015/00A;  
C12P-021/02B; A61K-039/108B; C07K-013/00B; C07K-015/00B; A61K-039/40B;  
A61K-039/44B; G01N-033/569B DESIGNATED COUNTRIES: AT; BE; CH; DE; FR; GB;  
IT; LI; LU; NL; SE

7/3,AB/22 (Item 3 from file: 399)  
DIALOG(R)File 399:CA SEARCH(R)  
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101177323 CA: 101(20)177323n JOURNAL  
Production and testing of Escherichia coli (LTB) toxoid  
AUTHOR(S): Frantz, Joseph C.; Mellencamp, Mark W.  
LOCATION: Norden Lab., Inc., Lincoln, NE, 68501, USA  
JOURNAL: Proc. - Int. Symp. Neonat. Diarrhea DATE: 1984 VOLUME: 4th,  
PAGES: 500-17 CODEN: PSNDDU LANGUAGE: English MEETING DATE: 830000

7/3,AB/23 (Item 1 from file: 144)  
DIALOG(R)File 144:Pascal  
(c) 2002 INIST/CNRS. All rts. reserv.

12857818 PASCAL No.: 97-0079094  
Immunogenicity of a fusion protein linking the beta subunit carboxyl  
terminal peptide (CTP) of human chorionic gonadotropin to the %B% %subunit%  
of %Escherichia% %coli% heat-labile enterotoxin  
ROCK E P; REICH K A; LYU D M; HOVI M; HARDY J; SCHOOLNIK G K; STOCKER B A  
D; STEVENS V

Department of Microbiology and Immunology, Stanford University School of  
Medicine, Stanford, CA 94305-5402, United States; Department of Obstetrics  
and Gynecology, Ohio State University School of Medicine, Columbus, OH  
43210, United States

Journal: Vaccine, 1996, 14 (16) 1560-1568

Language: English

Human chorionic gonadotropin (hCG) is currently under investigation as an  
antigenic target in both anti-cancer and anti-fertility %vaccines%.  
Formulations studied to date show promise in clinical trials for both  
applications yet are expensive to produce and require frequent  
administration in order to maintain an effective antibody titer. We have  
engineered a fusion protein consisting of %Escherichia% %coli% heat-labile  
enterotoxin subunit B (%LTB%) genetically linked at its C terminus via a  
nine amino acid linker to the 37 amino acid carboxyl terminal peptide (CTP)  
of the hCG beta chain. This %LTB%-CTP fusion protein is stably expressed in  
bacteria and forms pentamers of full-length protein subunits. Purified %LTB%  
-CTP protein induces hCG-specific antibodies in mice without additional  
adjuvants.

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7/3,AB/24 (Item 1 from file: 357)  
DIALOG(R)File 357:Derwent Biotechnology Abs  
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0207403 DBA Accession No.: 97-02524  
Engineering of cholera toxin A-subunit for carriage of epitopes at its  
amino end - recombinant %vaccine% construction for use in virus or



bacterium disease prevention

AUTHOR: Sanchez J; Argotte R; Buelna A

CORPORATE AFFILIATE: Univ.Cuernavaca-Inst.Nat.Salud-Publica

CORPORATE SOURCE: Centro de Investigacion sobre Enfermedades Infecciosas,  
Instituto Nacional de Salud Publica, Av Universidad 655, Col. Sta.  
maria Ahuacatitlan, Cuernavaca, Morelos 62508, Mexico.  
email:jsanchez@insp3.insp.mx

JOURNAL: FEBS Lett. (401, 1, 95-97) 1997

ISSN: 0014-5793 CODEN: FEBLAL

LANGUAGE: English

ABSTRACT: The cholera toxin A-subunit (CTA) was subjected to genetic engineering at its amino-terminal end and tested as a vector for carriage of epitopes by fusion of the STa thermostable enterotoxin analog CAELCCNPAC. The CTA gene was cloned in plasmid pJS162 under the control of the %LTB% signal peptide. A SacI site was introduced for genetic fusions. Efficient hologoxin formation by complementation in trans with cholera toxin %B%-subunit% (CTB) (the gene from plasmid pJS384) showed no reduction in affinity for CTB, but evidence of reduced toxicity suggested steric interference by the decapeptide with the active site. The %holotoxin% was stable, capable of binding GM1 and was recognized by anti-STa and anti-CTA antibodies. The use of a full-length CTA may have been a key step for successful genetic fusions. The CTA construct was able to carry a 16 amino acid foreign peptide and may be useful for recombinant %vaccine% construction for protection against a variety of bacterial and virus diseases. (34 ref)

7/3,AB/25 (Item 2 from file: 357)

DIALOG(R)File 357:Derwent Biotechnology Abs

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0206828 DBA Accession No.: 97-01949

Immunogenicity of a fusion protein linking the beta-subunit carboxyl terminal peptide (CTP) of human chorionic gonadotropin - to the %B%-subunit% of %Escherichia% %coli% heat-labile enterotoxin; HCG peptide-toxin fusion protein expression for use as an antitumor and contraceptive recombinant %vaccine%

AUTHOR: Rock E P; Reich K A; Lyu D M; Hovi M; Hardy J; Schoolnik G K; Stocker B A D; Stevens V

CORPORATE AFFILIATE: Univ.Stanford Univ.Ohio-State

CORPORATE SOURCE: Department of Microbiology and Immunology, Stanford  
University School of Medicine, Stanford, CA 94305-5402, USA.

JOURNAL: Vaccine (14, 16, 1560-68) 1996

ISSN: 0264-410X CODEN: VACCDE

LANGUAGE: English

ABSTRACT: In an effort to reduce the side-effects of an HCG-based antitumor and contraceptive %vaccine%, a fusion protein was genetically engineered consisting of %Escherichia% %coli% heat-labile enterotoxin (%LTB%). A C-terminal peptide (CTP) gene fraction was created using polymerase chain reaction (PCR). The CTP gene fraction was subcloned into plasmid Bluescript and transformed into %E%. %coli% DH5-alpha-F. The fragment was then transferred into the PstI and HindIII sites of pRE.LTL to create pRE201. Plasmid pRE.LTL contained the %LTB% gene. Both DNA strands of the %LTB%-CTP fusion construct in pRE201 were sequenced to confirm that no PCR errors had been introduced into the CTP portion. Following bacterial culture, the %LTB%-CTP fusion protein was harvested, fractionated and purified by affinity chromatography. The %LTB%-CTP fusion protein was stably expressed in bacteria and formed pentamers of full-length protein subunits. Purified %LTB%-CTP protein was found to induce hCG-specific antibodies in mice without additional adjuvants. (46 ref)

7/3,AB/26 (Item 3 from file: 357)

DIALOG(R)File 357:Derwent Biotechnology Abs

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0171040 DBA Accession No.: 94-13591

Expression of candidate oral %vaccine% antigens in transgenic plants -

hepatitis B virus recombinant surface antigen, Norwalk virus capsid protein, etc. gene expression in tobacco, lettuce and tomato; potential oral recombinant %vaccine% (conference abstract)

AUTHOR: Mason H S; Shi J J; Haq T; Arntzen C J

CORPORATE AFFILIATE: Univ.Texas-A+M-Syst.Inst.Biosci.Technol.

CORPORATE SOURCE: Institute of Biosciences and Technology, Texas A & M University, 2121 W. Holcombe Blvd., Houston, TX 77030, USA.

JOURNAL: J.Cell.Biochem. (Suppl.18A, 98) 1994

CODEN: JCEBD5

LANGUAGE: English

ABSTRACT: Using Agrobacterium-mediated transformation, antigen genes were transferred to tobacco (*Nicotiana tabacum*), lettuce (*Lactuca sativa*), tomato (*Lycopersicon esculentum*) and potato (*Solanum tuberosum*) plants. Transgenic plants were successfully produced that expressed hepatitis B virus surface antigen (HBsAg), Norwalk virus capsid protein (NVCP), and %*Escherichia coli*% heat-labile enterotoxin %B% %subunit% (%LTB%). The HBsAg and NVCP assembled into sub-viral particulate structures with sedimentation coefficients of about 50S and 40S, respectively. After purification by immunoaffinity chromatography, the particles were visualized by negative staining and transmission electron microscopy as spherical objects with diameters of about 20 nm. The occurrence of these antigens as particles may be critical for their use as oral %vaccines%. The %LTB% isolated from transgenic plants bound to ganglioside, which indicated that it was competent to form characteristic pentamers and bind to gut mucosal cells. Immunogenicity testing of the plant-derived antigens in animals is in progress. (0 ref)

7/3,AB/27 (Item 4 from file: 357)

DIALOG(R)File 357:Derwent Biotechnology Abs

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0148225 DBA Accession No.: 93-06277

Intranasal immunization against herpes simplex virus infection by using a recombinant glycoprotein-D fusion with immunomodulating proteins, the %B% %subunit% of %*Escherichia coli*% heat-labile enterotoxin and interleukin-2 - examination of fusion protein as %vaccine%

AUTHOR: Hazama M; Mayumi-Aono A; Miyazaki T; Hinuma S; Fujisawa Y

CORPORATE AFFILIATE: Takeda-Chem.

CORPORATE SOURCE: Pharmaceutical Research Division, Takeda Chemical Industries, Ltd., Osaka 532, Japan.

JOURNAL: Immunology (78, 4, 643-49) 1993

CODEN: IMMUAM

LANGUAGE: English

ABSTRACT: To establish a novel strategy of mucosal immunization against herpes simplex virus-1 (HSV-1) infection, immune responses elicited by intranasal immunization with several forms of recombinant glycoprotein-D (gD) of HSV-1 were examined. A truncated gD (t-gD) co-administered with heat-labile enterotoxin-%B% %subunit% (%LTB%) from %*Escherichia coli*% induced a mucosal immune response involving secretion of anti-gD IgA and serum IgG production. The fusion protein t-gD-%LTB%, expressed in myeloma Sp2/0-Ag14 cells (plasmid pHDTneo1), induced the responses more efficiently than did co-administration of t-gD and %LTB%. Another fusion protein, consisting of t-gD and human interleukin-2 (IL-2), also elicited antibody responses in BALB/c mice. Immunity acquired by intranasal immunization with t-gD-IL-2 protected mice from i.p. HSV-1 infections, whereas t-gD-%LTB% or t-gD alone failed to provide protection. The lack of response to gD was abrogated by co-administration with IL-1, and administration of t-gD-IL-2 induced a high level of antibody responses. The results suggest that the IL-2 fusion strategy yields a new type of mucosal immunization. (33 ref)

7/3,AB/28 (Item 5 from file: 357)

DIALOG(R)File 357:Derwent Biotechnology Abs

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0131886 DBA Accession No.: 92-04378

Hybrid enterotoxin LTA::STa proteins and their protection from degradation by in vivo association with B-subunits of *Escherichia coli* heat-labile enterotoxin - antigen cloning and fusion protein construction; potential vaccine

AUTHOR: Sanchez J; Hirst T R; Uhlin B E

CORPORATE SOURCE: Department of Medical Microbiology, Guldhedsgatan 10, Goteborg S-413-46, Sweden.

JOURNAL: Gene (64, 2, 265-75) 1988

CODEN: GENED6

LANGUAGE: English

ABSTRACT: Fusion proteins containing antigenic determinants of heat-labile enterotoxin (LT) and heat-stable enterotoxin (STa) on the same molecule could be used in construction of immunoprophylactic and diagnostic reagents for *Escherichia coli* diarrhea in humans and animals. Fusion of 2 different lengths of the STa gene to the C end of the A-subunit of LT (LTA) on plasmid pMMB68, and cloning in *Escherichia coli* K-12 ORN103 resulted in expression of LTA::STa fusion proteins, monitored by ELISA with monoclonal antibodies to LTA, LTB and STa. The mol.wt. of LTA::STa fusion proteins was 73,000. Immunoblot analysis confirmed that both types of antigen were present. For efficient expression of both antigens it was essential to coexpress them with the respective B-subunit of LT (LTB). The resulting expressed complexes were located in the *E. coli* periplasm. The exported fusion proteins, once associated with LTB, were stable and formed molecules behaving as native LT. The protective effect of the B-subunit could be extended to other LTA-derived proteins, allowing fusion of other peptides of interest to LTA and their recovery in the same manner. (34 ref)

7/3,AB/31 (Item 1 from file: 654)

DIALOG(R) File 654:US PAT.FULL.

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02705715

Utility

IMMUNOLOGICAL TOLERANCE-INDUCING AGENT

[ Administering autoantigen linked to a mucosa-binding molecule by transdermal delivery across mucous membranes]

PATENT NO.: 5,681,571

ISSUED: October 28, 1997 (19971028)

INVENTOR(s): Holmgren, Jan, Vastra Frolunda, SE (Sweden)

Czerkinsky, Cecil, Goteborg, SE (Sweden)

ASSIGNEE(s): Duotol AB, (A Non-U.S. Company or Corporation), Vastra Frolunda, SE (Sweden)

[Assignee Code(s): 43594]

APPL. NO.: 8-184,458

FILED: January 19, 1994 (19940119)

PRIORITY: 9303301, SE (Sweden), October 8, 1993 (19931008)

This is a continuation-in-part of application Ser. No. 08-160,106, filed Nov. 30, 1993, now abandoned.

FULL TEXT: 1352 lines

#### ABSTRACT

An immunological tolerance-inducing agent comprising a mucosa-binding molecule linked to a specific tolerogen is disclosed. Further, a method of inducing immunological tolerance in an individual against a specific antigen, including hapten, which causes an unwanted immune response in said individual comprising administration by a mucosal route of an immunologically effective amount of an immunological tolerance-inducing agent of the invention to said individual, is described.

7/3,AB/32 (Item 2 from file: 654)

DIALOG(R)File 654:US PAT.FULL.  
(c) format only 2002 The Dialog Corp. All rts. reserv.

02677616

Utility

RECOMBINANT AVIRULENT SALMONELLA ANTIFERTILITY %VACCINES%  
[Immunize a vertebrate subject against the gamete-specific antigen]

PATENT NO.: 5,656,488  
ISSUED: August 12, 1997 (19970812)  
INVENTOR(s): Curtiss, III, Roy, St. Louis, MO (Missouri), US (United States of America)  
Tung, Kenneth S. K., Charlottesville, VA (Virginia), US (United States of America)  
ASSIGNEE(s): Washington University, (A U.S. Company or Corporation), St Louis, MO (Missouri), US (United States of America)  
[Assignee Code(s): 90682]  
APPL. NO.: 8-222,182  
FILED: April 01, 1994 (19940401)

CROSS-REFERENCE TO RELATED APPLICATION

This is a continuation of application Ser. No. 07-791,347, filed on Nov. 18, 1991 (now abandoned) which is a continuation-in-part of U.S. patent application Ser. No. 07-615,720, filed on Nov. 21, 1990 (now abandoned), from which priority is claimed pursuant to 35 USC section 120 and which is incorporated herein by reference in its entirety.

REFERENCE TO GOVERNMENT GRANT

This invention was made with Government support under Grant Nos. RO1 DE06669, awarded by the National Institutes of Health, and CSA-90-071, given by the Contraceptive Research and Development Program (CONRAD). The Government has certain rights in this invention.

FULL TEXT: 3142 lines

ABSTRACT

Avirulent microbes which include a recombinant expression system encoding a gamete-specific antigen, are disclosed. The microbes can be used in compositions to immunize a vertebrate subject against the gamete-specific antigen, thereby preventing or reducing conception rates in the subject to which they are administered.

7/3,AB/33 (Item 3 from file: 654)  
DIALOG(R)File 654:US PAT.FULL.  
(c) format only 2002 The Dialog Corp. All rts. reserv.

02605673

Utility

FUSION PROTEINS

[Formation of pentamer complex and binding to gangliosides and hinges of glycineproline and antigens or epitopes]

PATENT NO.: 5,589,384  
ISSUED: December 31, 1996 (19961231)  
INVENTOR(s): Lipscombe, Martin J., Cambridge, GB (United Kingdom)  
Charles, Ian G., Beckenham, GB (United Kingdom)  
Fairweather, Neil F., Beckenham, GB (United Kingdom)  
ASSIGNEE(s): Glaxo Wellcome Inc, (A U.S. Company or Corporation), Research Triangle Park, NC (North Carolina), US (United States of America)  
[Assignee Code(s): 37399]  
APPL. NO.: 8-237,716

FILED: May 02, 1994 (19940502)  
PRIORITY: 9112553.4, GB (United Kingdom), June 11, 1991 (19910611)

This is a continuation of application Ser. No. 07-896,003, filed Jun. 11, 1992, now abandoned.

FULL TEXT: 787 lines

#### ABSTRACT

A fusion protein suitable for use as a %vaccine% comprises an amino acid sequence having biological activity which is fused via an intervening hinge comprising from two to eight glycine-proline repeats to the C-terminus of sufficient of the amino acid sequence of a %B% %subunit% of an enterotoxin which is capable of ADP-ribosylation of a GTPase.

7/3,AB/34 (Item 4 from file: 654)  
DIALOG(R)File 654:US PAT.FULL.  
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02400315

#### Utility

##### LHRH-TRATP FUSION PROTEINS

[%Vaccines% of TraT protein complexes; antifertility agents; contraceptives; veterinary medicine; side effect reduction; genetic engineering]

PATENT NO.: 5,403,586  
ISSUED: April 04, 1995 (19950404)  
INVENTOR(s): Russell-Jones, Gregory J., Middle Cove, AU (Australia)  
Stewart, Andrew G., Pymble, AU (Australia)  
Tsonis, Con G., Denistone, AU (Australia)  
ASSIGNEE(s): Biotechnology Australia Ptl Ltd, (A Non-U.S. Company or Corporation), Roseville, AU (Australia)  
[Assignee Code(s): 20758]  
APPL. NO.: 7-690,983  
FILED: June 25, 1991 (19910625)  
PRIORITY: PJ5979, AU (Australia), August 25, 1989 (19890825)  
PCT: PCT-AU90-00373 (WO 90AU373)  
Section 371 Date: June 25, 1991 (19910625)  
Section 102(e) Date: June 25, 1991 (19910625)  
Filing Date: August 24, 1990 (19900824)  
Publication Number: WO91-02799 (WO 912799)  
Publication Date: March 07, 1991 (19910307)

FULL TEXT: 1927 lines

#### ABSTRACT

This invention relates to the preparation of novel fusion proteins which comprise an analogue of LHRH and TraTp or an analogue of TraTp. The fusion proteins of the invention are useful as components of %vaccines% for the inhibition or control of reproductive functions in vertebrate hosts. The invention also relates to polynucleotide molecules encoding the fusion proteins, to transformant hosts expressing the fusion proteins and to methods of inhibiting or controlling reproductive function in vertebrate hosts using the fusion proteins or %vaccines% of the invention.

7/3,AB/35 (Item 5 from file: 654)  
DIALOG(R)File 654:US PAT.FULL.  
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02284038

#### Utility

POLYNUCLEOTIDE CONSTRUCTS FOR SECRETED GLYCOSYLATED PLASMINOGEN ACTIVATOR INHIBITOR-2 (PAI-2)

[Genetic engineering and gene expression]

PATENT NO.: 5,298,400  
ISSUED: March 29, 1994 (19940329)  
INVENTOR(s): Whitfeld, Peter L., Glebe, AU (Australia)  
Richardson, Michael A., Belrose, AU (Australia)  
Bunn, Clive L., West Ryde, AU (Australia)  
ASSIGNEE(s): Biotechnology Australia Pty Ltd, (A Non-U.S. Company or  
Corporation), New South Wales, AU (Australia)  
[Assignee Code(s): 20758]  
APPL. NO.: 7-679,052  
FILED: May 06, 1991 (19910506)  
PRIORITY: PJ6179, AU (Australia), September 5, 1989 (19890905)  
PCT: PCT-AU90-00396 (WO 90AU396)  
Section 371 Date: May 06, 1991 (19910506)  
Section 102(e) Date: May 06, 1991 (19910506)  
Filing Date: September 04, 1990 (19900904)  
Publication Number: WO91-03556 (WO 913556)  
Publication Date: March 21, 1991 (19910321)

FULL TEXT: 1852 lines

#### ABSTRACT

This invention relates to PAI-2 and its expression as a recombinant molecule in eukaryotic cell lines as a glycosylated secreted molecule, to the constructs expressing it, to host cells expressing it, to compositions comprising it, to methods of treatment, prophylaxis and diagnosis using it and to antibodies raised against it. The invention also provides a 414 amino acid form of PAI-2 wherein the N-terminal methionine residue is deleted, a 60 kD glycosylated secreted recombinant form of PAI-2 and compositions and methods using these molecules. The invention further relates to a novel synthetic signal peptide.

7/3,AB/36 (Item 6 from file: 654)  
DIALOG(R)File 654:US PAT.FULL.  
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02249963

Utility  
RECOMBINANT SYSTEMS FOR EXPRESSION OF CHOLERA B-SUB-UNIT WITH THE AID OF  
FOREIGN PROMOTERS AND/OR LEADER PEPTIDES  
[Binding]

PATENT NO.: 5,268,276  
ISSUED: December 07, 1993 (19931207)  
INVENTOR(s): Holmgren, Jan, Korvettgatan 1D, Vastra Frolunda S-421 74, SE  
(Sweden)  
Sanches Castillo, Joaquin, Col. San Anton, Cuernavaca, Morelos  
62020, MX (Mexico)  
[Assignee Code(s): 68000]  
EXTRA INFO: Assignment transaction [Reassigned], recorded May 2,  
1994 (19940502)  
APPL. NO.: 7-912,075  
FILED: July 08, 1992 (19920708)  
PRIORITY: 8803291-1, SE (Sweden), September 16, 1988 (19880916)

This is a continuation of application Ser. No. 07-408,758, filed Sep. 18,  
1989, abandoned.

FULL TEXT: 823 lines

#### ABSTRACT

Disclosed herein are procedures whereby with the aid of recombinant DNA

methods, the expression of the binding subunit protein of cholera toxin (CTB) or derivatives thereof including hybrid gene fusion proteins to CTB has been brought under the control of a foreign (non-cholera toxin) promoter and/or the CTB protein or its derivatives being synthesized with a foreign rather than the natural leader peptide to facilitate translocation across cell membranes.

7/3,AB/37 (Item 7 from file: 654)  
DIALOG(R) File 654:US PAT.FULL.  
(c) format only 2002 The Dialog Corp. All rts. reserv.

02219474

Utility

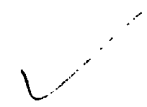
FUSED PROTEINS COMPRISING GLYCOPROTEIN GD OF HSV-1 AND %LTB%  
[Glycoprotein of Herpes simplex virus type 1 and heat-labile enterotoxin %B% %subunit%; enhanced absorption for immunization through nasal mucosa]

PATENT NO.: 5,241,053  
ISSUED: August 31, 1993 (19930831)  
INVENTOR(s): Fujisawa, Yukio, Hyogo, JP (Japan)  
Hinuma, Shuji, Osaka, JP (Japan)  
Mayumi, Aki, Osaka, JP (Japan)  
Yamamoto, Tatsuo, Chiba, JP (Japan)  
ASSIGNEE(s): Takeda Chemical Industries, Ltd, (A Non-U.S. Company or Corporation), Osaka, JP (Japan)  
[Assignee Code(s): 82624]  
EXTRA INFO: Expired, effective August 31, 2001 (20010831), recorded in O.G. of November 6, 2001 (20011106)  
APPL. NO.: 7-577,915  
FILED: September 05, 1990 (19900905)

FULL TEXT: 585 lines

ABSTRACT

Disclosed are (1) a fused protein comprising heat-labile enterotoxin %B% %subunit% and a protein heterologous to heat-labile enterotoxin, (2) a recombinant DNA containing a nucleotide sequence coding for the above fused protein, (3) a transformant harboring the above recombinant DNA, (4) a method for producing the fused protein which comprises cultivating the above transformant, producing and accumulating the above fused protein in a culture, and collecting the fused protein, and (5) a method for purifying a fused protein comprising a herpes simplex virus surface antigen and heat-labile enterotoxin %B% %subunit%, which comprises cultivating a transformant harboring a recombinant DNA containing a nucleotide sequence coding for the fused protein, producing and accumulating the fused protein in a culture, collecting the fused protein and subjecting the collected fused protein to purification processes comprising cationic exchange chromatography and gel permeation chromatography.



7/3,AB/38 (Item 8 from file: 654)  
DIALOG(R) File 654:US PAT.FULL.  
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02152103

Utility

%VACCINE% PREPARATION COMPRISING A BACTERIAL TOXIN ADJUVANT

PATENT NO.: 5,182,109  
ISSUED: January 26, 1993 (19930126)  
INVENTOR(s): Tamura, Shinichi, Kanagawa, JP (Japan)  
Kurata, Takeshi, Tokyo, JP (Japan)  
Aizawa, Chikara, Kanagawa, JP (Japan)  
Nagamine, Takashi, Kanagawa, JP (Japan)  
ASSIGNEE(s): National Institute of Health, (A Non-U.S. Company or Corporation), Tokyo, JP (Japan)  
The Kitasato Institute, (A Non-U.S. Company or Corporation), Tokyo, JP (Japan)

[Assignee Code(s): 77; 46126]

EXTRA INFO: Reexamined, certified October 2, 2001 (20011002)  
APPL. NO.: 7-335,678  
FILED: April 10, 1989 (19890410)  
PRIORITY: 63-86693, JP (Japan), April 8, 1988 (19880408)  
1-6759, JP (Japan), January 13, 1989 (19890113)  
FULL TEXT: 1239 lines

#### ABSTRACT

A %vaccine% preparation comprising in combination a %vaccine% and a toxin or subunit thereof as an effective component. The toxin is preferably a bacterial toxin, e.g. cholera toxin, staphylococcal alpha-hemolysin, staphylococcal delta-hemolysin, vibrio thermostable direct hemolysin, pertussis toxin or %E%. %coli% heat-labile toxin. The toxin can be a %B% %subunit% or a part of a %B% %subunit% of a toxin. The %vaccine% can be influenza %vaccine%, pertussis %vaccine%, Japanese encephalitis %vaccine%, mixed %vaccine% of pertussis, diphtheria and tetanus toxoid, hepatitis B %vaccine%, rota %vaccine%, measles %vaccine%, rubella %vaccine%, mumps %vaccine%, combined %vaccine% of measles, rubella and mumps, or mycoplasma %vaccine%. The ratio of %vaccine% to toxin or subunit thereof is 1:0.0001-1:10,000 (w/v). The %vaccine% can be intranasal %vaccine%, or can be in injectable form, spray form or oral administration form.

7/3,AB/39 (Item 1 from file: 349)

DIALOG(R)File 349:PCT FULLTEXT

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00396942

GUA MUTANTS OF SHIGELLA spp. AND %VACCINES% CONTAINING THE SAME  
MUTANTS GUA DE SHIGELLA spp. ET %VACCINS% LES CONTENANT

Patent Applicant/Assignee:

UNIVERSITY OF MARYLAND AT BALTIMORE,

Inventor(s):

NORIEGA Fernando Ro,

LEVINE Myron M,

Patent and Priority Information (Country, Number, Date):

Patent: WO 9737685 A1 19971016

Application: WO 97US5954 19970409 (PCT/WO US9705954)

Priority Application: US 96629600 19960409

Designated States: AL AM AT AU AZ BB BG BR BY CA CH CN CZ DE DK EE ES FI GB

GE HU IL IS JP KE KG KP KR KZ LK LR LS LT LU LV MD MG MK MN MW MX NO NZ

PL PT RO RU SD SE SG SI SK TJ TM TR TT UA UG UZ VN GH KE LS MW SD SZ UG

AM AZ BY KG KZ MD RU TJ TM AT BE CH DE DK ES FI FR GB GR IE IT LU MC NL

PT SE BF BJ CF CG CI CM GA GN ML MR NE SN TD TG

Publication Language: English

Fulltext Word Count: 16956

English Abstract

Gua mutants of Shigella spp., and %vaccines% containing the same are disclosed.

French Abstract

L'invention concerne des mutants gua de Shigella spp., et des %vaccins% les contenant.

7/3,AB/40 (Item 2 from file: 349)

DIALOG(R)File 349:PCT FULLTEXT

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00389985

ISCOM OR ISCOM-MATRIX COMPRISING A MUCUS TARGETTING SUBSTANCE AND  
OPTIONALLY, AN ANTIGEN

COMPOSE IMMUNOSTIMULATEUR OU MATRICE DE COMPOSES IMMUNOSTIMULATEURS  
RENFERMANT UNE SUBSTANCE CIBLANT LE MUCUS ET, FACULTATIVEMENT, UN  
ANTIGENE

Patent Applicant/Assignee:



MOREIN Bror,  
LOVGREN BENGTSSON Karin,  
EKSTROM Jill,

Inventor(s):

MOREIN Bror,  
LOVGREN BENGTSSON Karin,  
EKSTROM Jill,

Patent and Priority Information (Country, Number, Date):

Patent: WO 9730728 A1 19970828  
Application: WO 97SE289 19970220 (PCT/WO SE9700289)  
Priority Application: SE 96647 19960221

Designated States: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES  
FI GB GE HU IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW  
MX NO NZ PL PT RO RU SD SE SG SI SK TJ TM TR TT UA UG US UZ VN YU KE LS  
MW SD SZ UG AM AZ BY KG KZ MD RU TJ TM AT BE CH DE DK ES FI FR GB GR IE  
IT LU MC NL PT SE BF BJ CF CG CI CM GA GN ML MR NE SN TD TG

Publication Language: English

Fulltext Word Count: 23379

English Abstract

The invention relates to immunogenic complex comprising iscom and/or iscommatrix and mucus targetting molecules for use for preparing %vaccines% and immune stimulating compositions for oral, nasal, urogenital and/or rectal administration. The immunogenic complex may comprise at least one glycoside and at least one lipid and a) at least one mucus targetting molecule chosen among substances that target lymphatic tissue and induce immune response when administrated locally on mucous membranes; and b) possibly also one passenger antigen chosen among pharmacologically immune active or immune substances that do not easily reach lymphatic tissue through mucous membranes.

French Abstract

Complexe immunogenique comprenant un compose immunostimulateur et/ou une matrice de composés immunostimulateurs et des molecules ciblant le mucus pour la preparation de %vaccins% et de compositions immunostimulatrices pour administration par voie orale, nasale, urogenitale et/ou rectale. Le complexe immunogenique peut renfermer au moins un glycoside et au moins un lipide ainsi que a) au moins une molecule ciblant le mucus, choisie parmi les substances qui ciblent les tissus lymphatiques et induisent une reponse immunitaire lorsqu'elles sont administrees localement sur des membranes muqueuses; et b) eventuellement un antigene passager choisi parmi les substances pharmacologiquement immunoactives ou immunes n'atteignant pas aisement les tissus lymphatiques a travers les membranes muqueuses.

7/3,AB/41 (Item 3 from file: 349)

DIALOG(R)File 349:PCT FULLTEXT

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00347536

HAPTEN-CARRIER CONJUGATES FOR USE IN DRUG-ABUSE THERAPY

CONJUGUES VECTEURS DE HAPTENE UTILISES DANS UNE THERAPIE CONTRE L'USAGE DE  
DROGUES

Patent Applicant/Assignee:

IMMULOGIC PHARMACEUTICAL CORPORATION,

Inventor(s):

SWAIN Philip A,  
SCHAD Victoria C,  
GREENSTEIN Julia L,  
EXLEY Mark A,  
FOX Barbara S,  
POWERS Stephen P,  
GEFTER Malcolm L,  
BRINER Thomas J,

Patent and Priority Information (Country, Number, Date):

Patent: WO 9630049 A2 19961003  
Application: WO 96US4189 19960327 (PCT/WO US9604189)  
Priority Application: US 95414971 19950331; US 95563673 19951128

Designated States: AM AT AU BB BG BR BY CA CN CZ DE DK EE ES FI GB GE HU IS  
JP KE KG KP KR KZ LK LR LT LU LV MD MG MN MW MX NO NZ PL PT RO RU SD SE  
SG SI SK TJ TM TT UA UG UZ VN KE LS MW SD SZ UG AT BE CH DE DK ES FI FR  
GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN ML MR NE SN TD TG  
Publication Language: English  
Fulltext Word Count: 25377

#### English Abstract

Hapten-carrier conjugates capable of eliciting anti-hapten antibodies in vivo by administering, in a therapeutic composition, are disclosed. Methods of preparing said conjugates and therapeutic compositions are also disclosed. Where the hapten is a drug of abuse, a therapeutic composition containing the hapten-carrier conjugate is particularly useful in the treatment of drug addiction, more particularly, cocaine addiction. Passive immunization using antibodies raised against conjugates of the instant invention is also disclosed. The therapeutic composition is suitable for co-therapy with other conventional drugs.

#### French Abstract

L'invention concerne des conjugues vecteurs de haptene capables de déclencher des anticorps anti-haptene in vivo par administration dans une composition thérapeutique. L'invention concerne également des procedes de preparation desdits conjugues et desdites compositions thérapeutiques. Dans les cas ou le haptene est une substance toxique, une composition thérapeutique contenant le conjugue vecteur de haptene est particulièrement utile dans le traitement de la toxicomanie, plus particulièrement de l'accoutumance a la cocaine. De plus, l'invention concerne une immunisation passive utilisant des anticorps developpes contre des conjugues de la presente invention. La composition thérapeutique est adaptee a une co-therapie avec d'autres médicaments classiques.

7/3,AB/42 (Item 4 from file: 349)  
DIALOG(R)File 349:PCT FULLTEXT  
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00333667  
IMMUNOGENS FOR STIMULATING MUCOSAL IMMUNITY  
IMMUNOGENES POUR STIMULER L'IMMUNITE DES MUQUEUSES

Patent Applicant/Assignee:

LEBENS Michael Richard,  
HOLMGREN Jan Roland,

Inventor(s):

LEBENS Michael Richard,  
HOLMGREN Jan Roland,

Patent and Priority Information (Country, Number, Date):

Patent: WO 9616178 A1 19960530  
Application: WO 95GB2708 19951117 (PCT/WO GB9502708)  
Priority Application: US 94342241 19941117

Designated States: AL AM AT AU BB BG BR BY CA CH CN CZ DE DK EE ES FI GB GE  
HU IS JP KE KG KP KR KZ LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT  
RO RU SD SE SG SI SK TJ TM TT UA UG UZ VN KE LS MW SD SZ UG AT BE CH DE  
DK ES FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN ML MR NE SN  
TD TG

Publication Language: English  
Fulltext Word Count: 20012

#### English Abstract

This patent application relates to immunogens for stimulating mucosal immunity to a pathogen capable of infecting its host through contact with mammalian mucosal membranes. In particular, this invention discloses a number of polypeptides and genetic constructs that include a membrane binding polypeptide operably linked to a peptide from a pathogen. Methods are detailed throughout the claims and the specification for introducing these immunogens into a mammal to stimulate mucosal immune responses.

#### French Abstract

L'invention concerne des immunogenes pour stimuler l'immunité des muqueuses contre un pathogene capable d'infecter un hôte mammifère par

contact avec les membranes muqueuses. En particulier, cette invention concerne certains polypeptides et produits de recombinaison genetique contenant un polypeptide, se fixant aux membranes en etant lies physiquement a un peptide provenant d'un pathogene. On decrit en detail dans le descriptif et dans les revendications de cette demande de brevet, des procedes permettant d'administrer ces immunogenes a des mammiferes pour stimuler la reponse immunitaire au niveau des muqueuses.

7/3,AB/43 (Item 5 from file: 349)  
DIALOG(R)File 349:PCT FULLTEXT  
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00330290

ORAL IMMUNIZATION WITH TRANSGENIC PLANTS  
IMMUNISATION PAR VOIE ORALE A L'AIDE DE PLANTES TRANSGENIQUES

Patent Applicant/Assignee:

THE TEXAS A & M UNIVERSITY SYSTEM,  
THE ADMINISTRATORS OF THE TULANE EDUCATIONAL FUND,  
ARNTZEN Charles J,  
MASON Hugh S,  
HAQ Tariq A,  
CLEMENTS John D,

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Patent and Priority Information (Country, Number, Date):

Patent: WO 9612801 A1 19960502  
Application: WO 95US13376 19951024 (PCT/WO US9513376)  
Priority Application: US 94328716 19941024

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IS JP KE KG KP KR KZ LK LR LT LU LV MD MG MN MW MX NO NZ PL PT RO RU SD  
SE SG SI SK TJ TM TT UA UG US UZ VN KE LS MW SD SZ UG AT BE CH DE DK ES  
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Publication Language: English

Fulltext Word Count: 28430

English Abstract

The oral %vaccines% and oral %vaccine% adjuvants of the present invention are produced in transgenic plants and then administered through the consumption of the transgenic plant. DNA sequences both natural and synthetic encoding for the expression of immunogenic agents which are capable of causing an immune response in animals when fed in edible plants, plant tissues, or derived plant materials are constructed and plants transformed for stable or transient expression in plant cells. The present invention provides the first known functional method for immunizing animals via transgenic plants, where the plants express bacterial antigens that act as both immunogens and adjuvants when the transgenic plant material expressing the antigens is fed to animals.

French Abstract

Les %vaccins% oraux et leurs adjuvants de l'invention sont produits dans des plantes transgeniques puis administres par absorption d'une telle plante. On assemble des sequences d'ADN, naturelles ou synthetiques, qui codent pour l'expression d'agents immunogenes capables de provoquer une reponse immunitaire chez des animaux lorsqu'ils mangent ces plantes comestibles, des tissus vegetaux ou des elements derives de ces plantes, et on transforme des plantes pour qu'elles procedent a l'expression stable ou transitoire de telles sequences dans leurs cellules. L'invention concerne le premier procede fonctionnel connu premettant d'immuniser des animaux par l'intermediaire de plantes transgeniques qui expriment des antigenes bacteriens agissant tant comme immunogenes que comme adjuvants, quand les elements de plantes transgeniques exprimant ces antigenes sont absorbes par des animaux.

7/3,AB/44 (Item 6 from file: 349)

DIALOG(R) File 349:PCT FULLTEXT  
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00292152

IMMUNOLOGICAL TOLERANCE-INDUCING AGENT  
AGENT D'INDUCTION D'IMMUNOTOLERANCE

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Patent and Priority Information (Country, Number, Date):

Patent: WO 9510301 A1 19950420

Application: WO 94SE941 19941007 (PCT/WO SE9400941)

Priority Application: SE 933301 19931008; US 93160106 19931130; US  
94184458 19940119

Designated States: AU CA CN JP KR AT BE CH DE DK ES FR GB GR IE IT LU MC NL  
PT SE

Publication Language: English

Fulltext Word Count: 11201

#### English Abstract

An immunological tolerance-inducing agent comprising a mucosabinding molecule linked to a specific tolerogen is disclosed. Further, a method of inducing immunological tolerance in an individual against a specific antigen, including hapten, which causes an unwanted immune response in said individual comprising administration by a mucosal route of an immunologically effective amount of an immunological tolerance-inducing agent of the invention to said individual, is described.

#### French Abstract

Agent d'induction d'immunotolerance, comportant une molecule de liaison aux muqueuses liee a un tolerogene specifique. On a egalement prevu un procede d'induction chez un individu de l'immonotolerance vis-a-vis d'un antigene specifique, notamment l'haptene, qui provoque chez ledit individu une reponse immunitaire indesirable, ledit procede consistant a administrer par voie muqueuse une quantite a efficacite immunologique d'un agent d'induction d'immunotolerance du type precite.

7/3,AB/45 (Item 7 from file: 349)

DIALOG(R) File 349:PCT FULLTEXT

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00282028

IMPROVEMENTS IN OR RELATING TO %VACCINE% DEVELOPMENT  
AMELIORATIONS APORTEES AU DEVELOPPEMENT DE %VACCINS%

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Patent and Priority Information (Country, Number, Date):

Patent: WO 9500173 A1 19950105

Application: WO 94GB1396 19940628 (PCT/WO GB9401396)

Priority Application: GB 9313279 19930628

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KZ LK LU LV MG MN MW NL NO NZ PL PT RO RU SD SE SK UA US UZ VN AT BE CH  
DE DK ES FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN ML MR NE  
SN TD TG

Publication Language: English

Fulltext Word Count: 3582

#### English Abstract

Disclosed is a method eliciting an anti-H. pylori secretory IgA response in the milk of women, comprising administering to women an immunologically effective amount of a %vaccine%, said %vaccine% comprising one or more H. pylori antigens in a physiologically acceptable diluent and a method of protecting breast-fed infants against H. pylori infection.

#### French Abstract

L'invention concerne un procede declenchant une reaction de l'IgA secretoire anti-H. pylori dans le lait des femmes et consistant a administrer aux femmes une quantite immunologiquement effective d'un %vaccin%, ce %vaccin% comprenant un ou plusieurs antigenes de H. pylori dans un diluant physiologiquement acceptable. L'invention concerne egalement un procede de protection des enfants en bas age nourris au sein contre l'infection de H. pylori.

7/3,AB/46 (Item 8 from file: 349)

DIALOG(R)File 349:PCT FULLTEXT

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00258302

ANTIGEN OF HYBRID M PROTEIN AND CARRIER FOR GROUP A STREPTOCOCCAL %VACCINE%  
ANTIGENE DE LA PROTEINE M HYBRIDE ET PORTEUR DESTINE AU %VACCIN%  
ANTI-STREPTOCOCCIQUE DU GROUPE A

Patent Applicant/Assignee:

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Patent and Priority Information (Country, Number, Date):

Patent: WO 9406465 A1 19940331

Application: WO 93US8704 19930915 (PCT/WO US9308704)

Priority Application: US 92945860 19920916

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GB GR IE IT LU MC NL PT SE

Publication Language: English

Fulltext Word Count: 11145

#### English Abstract

Recombinant hybrid streptococcal M protein antigens are provided which elicit protective antibodies against Group A streptococci and prevent rheumatic fever. Recombinant hybrid genes which encode the antigen are provided. %Vaccine% compositions and methods of administering the compositions are provided to elicit immunity against Group A streptococci.

#### French Abstract

L'invention se rapporte a des antigenes de la proteine M streptococcique hybride recombinee qui produisent des anticorps protecteurs contre les streptocoques du groupe A et evitent les rhumatismes articulaires aigus. L'invention se rapporte egalement aux genes hybrides recombines qui codent l'antigene, ainsi qu'a des compositions de %vaccins% et aux procedes d'administration de ces compositions afin d'obtenir l'immunité contre les streptocoques du groupe A.

7/3,AB/47 (Item 9 from file: 349)

DIALOG(R)File 349:PCT FULLTEXT

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00212475

RECOMBINANT AVIRULENT SALMONELLA ANTIFERTILITY %VACCINES%  
%VACCINS% ANTICONCEPTIONNELS DE SALMONELLA AVIRULENT RECOMBINANT

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Patent and Priority Information (Country, Number, Date):

Patent: WO 920968 A1 19920611  
Application: WO 91US8688 19911120 (PCT/WO US9108688)  
Priority Application: US 90720 19901121; US 91347 19911118  
Designated States: AT AU BE CA CH DE DK ES FR GB GR IT JP LU NL SE  
Publication Language: English  
Fulltext Word Count: 25653

#### English Abstract

Avirulent microbes which include a recombinant expression system encoding a gamete-specific antigen, are disclosed. The microbes can be used in compositions to immunize a vertebrate subject against the gamete-specific antigen, thereby preventing or reducing conception rates in the subject to which they are administered.

#### French Abstract

L'invention se rapporte a des microbes avirulents comprenant un systeme d'expression recombinant codant un antigene specifique des gametes. On peut utiliser les microbes dans des compositions pour immuniser un sujet vertebre contre l'antigene specifique des gametes et, de ce fait, prevenir la conception ou diminuer sa frequence chez le sujet auquel on les administre.

7/3,AB/48 (Item 10 from file: 349)  
DIALOG(R) File 349:PCT FULLTEXT  
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00205968  
%VACCINES%  
%VACCINS%

#### Patent Applicant/Assignee:

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#### Inventor(s):

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#### Patent and Priority Information (Country, Number, Date):

Patent: WO 9203162 A1 19920305  
Application: WO 91GB1426 19910823 (PCT/WO GB9101426)  
Priority Application: GB 9018690 19900824

Designated States: AT BE CH DE DK ES FR GB GR IT JP LU NL SE US  
Publication Language: English  
Fulltext Word Count: 6582

#### English Abstract

Liposomes which have present on their surface a polypeptide capable of binding to a mucosal cell surface of a human or animal and which are substantially free of active neuraminidase are useful as %vaccines%.

#### French Abstract

Des liposomes, sur la surface desquels se trouve un polypeptide pouvant se lier avec une surface de cellule de muqueuse d'un humain ou d'un animal, et qui sont pratiquement depourvus de neuraminidase active, sont utiles comme %vaccins%.

7/3,AB/49 (Item 11 from file: 349)  
DIALOG(R) File 349:PCT FULLTEXT  
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00186213  
RECOMBINANT PRODUCT  
PRODUIT RECOMBINANT

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Patent and Priority Information (Country, Number, Date):  
Patent: WO 9103556 A1 19910321  
Application: WO 90AU396 19900904 (PCT/WO AU9000396)  
Priority Application: AU 896179 19890905  
Designated States: AT AU BE CA CH DE DK ES FR GB IT JP KR LU NL SE US  
Publication Language: English  
Fulltext Word Count: 13133

#### English Abstract

This invention relates to PAI-2 and its expression as a recombinant molecule in eukaryotic cell lines as a glycosylated secreted molecule, to the constructs expressing it, to host cells expressing it, to compositions comprising it, to methods of treatment, prophylaxis and diagnosis using it and to antibodies raised against it. The invention also provides a 414 amino acid form of PAI-2 wherein the N-terminal methionine residue is deleted, a 60 kD glycosylated secreted recombinant form of PAI-2 and compositions and methods using these molecules. The invention further relates to a novel synthetic signal peptide.

#### French Abstract

L'invention se rapporte a l'inhibiteur d'activateur de plasminogene de type 2 et a son expression comme molecule recombinante dans des lignees de cellules eukaryotiques sous la forme d'une molecule secretee glycosylee, aux structures permettant son expression, a des cellules hotes effectuant son expression, a des compositions le contenant, a des procedes de traitement, de prophylaxie et de diagnostic l'utilisant et a des anticorps dresses contre lui. L'invention se rapporte egalement a une forme de 414 acides amines du PAI-2, dans laquelle le residu de methionine de terminaison N est supprime, a une forme recombinante secretee glycosylee de 60 kD du PAI-2 et a des compositions et des procedes utilisant ces molecules. L'invention se rapporte en outre a un nouveau peptide de signal synthetique.

7/3,AB/50 (Item 12 from file: 349)  
DIALOG(R) File 349:PCT FULLTEXT  
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00185457

#### FUSION PROTEINS

#### PROTEINES DE FUSION

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#### Patent and Priority Information (Country, Number, Date):

Patent: WO 9102799 A1 19910307  
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Priority Application: AU 895979 19890825  
Designated States: AT AU BE CA CH DE DK ES FR GB IT JP LU NL SE US  
Publication Language: English  
Fulltext Word Count: 10098

#### English Abstract

This invention relates to the preparation of novel fusion proteins which comprise an analogue of LHRH and TraTp or an analogue of TraTp. The fusion proteins of the invention are useful as components of %vaccines% for the inhibition or control of reproductive functions in vertebrate hosts. The invention also relates to polynucleotide molecules encoding the fusion proteins, to transformant hosts expressing the fusion proteins and to methods of inhibiting or controlling reproductive function in vertebrate hosts using the fusion proteins or %vaccines% of the invention.

#### French Abstract

L'invention concerne la preparation de nouvelles proteines de fusion comprenant un analogue de LHRH et de TraTp ou un analogue de TraTp. Les proteines de fusion de l'invention sont utiles en tant que composants de %vaccins% permettant l'inhibition ou la regulation des fonctions de reproduction chez des hotes vertebres. L'invention concerne egalement des molecules de polynucleotides codant les proteines de fusion, des hotes transformants exprimant les proteines de fusion, ainsi que des procedes d'inhibition ou de regulation de la fonction de reproduction chez des hotes vertebres a l'aide des proteines de fusion ou de %vaccins% de l'invention.

7/3,AB/51 (Item 13 from file: 349)

DIALOG(R) File 349:PCT FULLTEXT

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00172910

HEAT-LABILE TOXIN %B% %SUBUNIT% FUSION PROTEINS

PROTEINES DE FUSION A SOUS-UNITE B DE TOXINE THERMOLABILE

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Inventor(s):

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Patent and Priority Information (Country, Number, Date):

Patent: WO 9006366 A1 19900614

Application: WO 89GB1462 19891206 (PCT/WO GB8901462)

Priority Application: GB 8828523 19881207; GB 8913991 19890617

Designated States: AU DK FI HU JP NO US

Publication Language: English

Fulltext Word Count: 5005

#### English Abstract

A fusion protein comprises subunit B of %E%. %coli% heat-labile toxin (%LTB%) having an antigen or epitope from a pathogen responsible for a human or veterinary disease fused to the carboxy-terminus of %LTB%. Such a fusion protein is obtained by culturing a host, such as a strain of %E% . %coli%, which has been transformed by a vector capable of expressing the fusion protein in that host. The fusion protein can be used as a %vaccine%.

#### French Abstract

Une proteine de fusion comprend la sous-unite B de la toxine thermolabile (%LTB%) %E%. %coli%, a la terminaison carboxy de laquelle est soude un antigene ou un epitope provenant d'un agent pathogene responsable d'une affection humaine ou animale. Une telle proteine de fusion est obtenue par mise en culture d'un hote, tel qu'une souche de %E%. %coli%, qui a ete transformee par un vecteur susceptible d'exprimer la proteine de fusion dans cet hote. Cette proteine de fusion peut s'utiliser comme %vaccin%.

7/3,AB/52 (Item 14 from file: 349)

DIALOG(R) File 349:PCT FULLTEXT

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00169989

PROTEINS FOR FUSING THE SUB-UNIT B OF THE CHOLERAIC TOXIN AND HETEROLOGOUS ANTIGEN, AND NUCLEIC ACIDS ENCODING THEM

PROTEINES DE FUSION DE LA SOUS-UNITE B DE LA TOXINE CHOLERIQUE ET D'UN ANTIGENE HETEROLOGUE ET ACIDES NUCLEIQUES LES ENCODANT

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Patent and Priority Information (Country, Number, Date):  
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Priority Application: FR 8812627 19880927  
Designated States: AT BE CH DE FR GB IT JP LU NL SE US  
Publication Language: French  
Fulltext Word Count: 14383

#### English Abstract

The invention relates to a hybrid protein which fuses the sub-unit B of the choleraic toxin with an active sequence of a heterologous antigen with respect to said unit. Said hybrid protein is comprised of a sequence of said sub-unit which extends between the 3rd and 100th amino acid rest of the complete sub-unit B. The heterologous amino acid sequence is used upstream or downstream of the latter. This hybrid protein is usable for %vaccination%, particularly to help the stabilisation of heterologous antigens in the intestinal environment.

#### French Abstract

L'invention concerne une proteine hybride de fusion de la sous-unite B de la toxine cholerique avec une sequence active d'un antigene heterologue vis-a-vis de ladite sous-unite. Cette proteine hybride comprend une sequence de ladite sous-unite s'etendant entre le 3eme et le 100eme residus d'acide amine de la sous-unite B complete. La sequence d'acide heterologue est fusionnee, en amont ou en aval de celle-ci. Cette proteine hybride est utilisable pour la %vaccination%, en particulier pour favoriser la stabilisation d'antigenes heterologues dans l'environnement intestinal.

7/3,AB/53 (Item 15 from file: 349)  
DIALOG(R) File 349:PCT FULLTEXT  
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00169985  
%VACCINE%  
%VACCIN%

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#### Patent and Priority Information (Country, Number, Date):

Patent: WO 9003433 A1 19900405  
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Priority Application: AU 88621 19880926; AU 88622 19880926; AU 88623 19880926; AU 88624 19880926

Designated States: AT AU BE CH DE FR GB IT JP LU NL SE US  
Publication Language: English  
Fulltext Word Count: 17322

#### English Abstract

The invention provides excretory/secretory antigens derived from parasitic nematode species which are capable of inducing protective immunity against infection by parasitic nematode species, and related

antigenic molecules. The invention also provides nucleotide sequences encoding the antigens and related molecules of the invention, recombinant DNA molecules comprising the nucleotide sequences, and transformed hosts carrying the recombinant DNA molecules. The invention further provides antibodies against the antigens and related molecules, and antibody compositions comprising the antibodies, %vaccines% comprising the antigens and/or related molecules and methods of treating or preventing nematode infections using the antigens and related molecules, %vaccines%, antibodies and/or antibody compositions of the invention.

#### French Abstract

La presente invention se rapporte a des antigenes excretoires secretoires tires d'especes de nematodes parasites, qui ont la propriete de produire une immunité protectrice contre les infections par des especes de nematodes parasites, ainsi que des molecules antigeniques associees. La presente invention se rapporte egalement a des sequences de nucleotides codant pour les antigenes et pour les molecules associees de la presente invention, a des molecules d'ADN recombinantes comprenant les sequences de nucleotides, ainsi qu'a des hotes transformes porteurs des molecules d'ADN recombinantes. La presente invention se rapporte en outre a des anticorps contre des antigenes et les molecules associees de la presente invention, a des compositions d'anticorps comprenant les anticorps decrits, a des %vaccins% comprenant les antigenes et/ou les molecules associees de la presente invention et a des procedes de traitement ou de prevention des infections par les nematodes au moyen des antigenes et des molecules associees, des %vaccins%, des anticorps et/ou des compositions d'anticorps de la presente invention.

7/3,AB/54 (Item 16 from file: 349)

DIALOG(R) File 349:PCT FULLTEXT

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00134119

ORAL %VACCINES%

%VACCINS% ORAUX

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Patent and Priority Information (Country, Number, Date):

Patent: WO 8606635 A1 19861120

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Priority Application: AU 85566 19850515; AU 853104 19851025

Designated States: AU BE CH DE DK FI FR GB IT JP KR NL NO SE SU US

Publication Language: English

Fulltext Word Count: 15052

#### English Abstract

A complex of an immunogen with a carrier molecule and a method for presentation of the immunogen to mucosal epithelia of a host vertebrate in order to elicit a systemic, cellular, and/or mucosal immune response in the host vertebrate to the complex. The invention also provides processes for the production of the complex. Further the invention provides medicaments containing the complex as well as medicaments which additionally contain dietary molecules. The dietary molecules provides a means of selectively modulating the magnitude and/or type of immune response to the complex of the medicament. The invention provides means for inhibiting gonadal function in a mammal as well as for selectively modulating cellular immune response to a complex according to the invention.

#### French Abstract

Complexe d'un immunogene presentant une molecule transporteuse et methode pour la presentation dudit immunogene a la muqueuse epitheliale d'un hote vertebre, afin d'obtenir une reponse immunitaire systematique, cellulaire et/ou mucosique au complexe chez le vertebre hote. L'invention se rapporte egalement aux procedes de production dudit complexe. En outre, l'invention fournit des medicaments contenant ledit complexe, ainsi que des medicaments qui contiennent des molecules dietetiques. Les molecules dietetiques offrent un moyen de moduler selectivement la grandeur et/ou le type de reponse immunitaire au complexe du medicament. L'invention offre un moyen d'empecher la fonction gonadale chez les mammiferes et de moduler selectivement les reponses immunitaires cellulaires a un complexe.

7/3,AB/55 (Item 17 from file: 349)  
DIALOG(R)File 349:PCT FULLTEXT  
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00124358

SYNTHETIC POLYPEPTIDE CORRESPONDING TO A PORTION OF THE HEAT-LABILE ENTEROTOXIN OF %ESCHERICHIA% %COLI%, COMPOSITIONS AND METHODS THEREWITH  
POLYPEPTIDE DE SYNTHESE CORRESPONDANT A UNE PARTIE DE L'ENTEROTOXINE THERMOLABILE D'%ESCHERICHIA% %COLI%, COMPOSITIONS ET PROCEDES

Patent and Priority Information (Country, Number, Date):

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Priority Application: US 83469 19831212

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Publication Language: English

Fulltext Word Count: 27117

#### English Abstract

Synthetic polypeptides containing about 10 to about 35 amino acid residues corresponding in sequence to the amino acid residue sequence of about position 35 to about position 95 from the amino-terminus of the %B% -%subunit% of the heat-labile enterotoxin of %Escherichia% %coli% along with composite polypeptides containing the polypeptide sequence of the heat-stable %Escherichia% %coli% enterotoxin, as are polymers containing the synthetic polypeptide and composite polypeptide as repeating units. The polypeptides are useful as conjugates coupled to a carrier or as a polymer as the active ingredient of an inoculum to raise antibodies and for protecting an animal host against infection by heat-labile enterotoxin-producing bacteria.

#### French Abstract

Polypeptides de synthese contenant d'environ 10 a environ 35 residus d'acide amine correspondant sequentiellement a la sequence de residu d'acide amine allant approximativement de la position 35 a la position 95 du terminus amine de la subunite B de l'enterotoxine thermolabile d' %Escherichia% %coli%, et polypeptides composites contenant la sequence polypeptidique de l'enterotoxine thermostable d' %Escherichia% %coli%, ainsi que les polymeres contenant le polypeptide de synthese et le polypeptide composite en tant qu'unite de repetition. Ces polypeptides sont utiles en tant que produits conjugues couples a un porteur ou en tant que polymere servant d'ingredient actif d'un inoculum afin d'accroitre les anticorps et pour proteger un animal hote d'une infection provoquee par une bacterie produisant une enterotoxine thermolabile.

7/3,AB/56 (Item 1 from file: 35)  
DIALOG(R)File 35:Dissertation Abs Online  
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01642426 AADC646602

GENETICALLY MODIFIED CHOLERA TOXIN B-SUBUNITS: POTENTIAL FOR USE IN %VACCINES% AND FOR ELUCIDATING TOXIN-RECEPTOR INTERACTIONS (%ESCHERICHIA% %COLI%)

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Degree: MED.DR.  
Year: 1997  
Corporate Source/Institution: GOTEBORGS UNIVERSITET (SWEDEN) (0904)  
Source: VOLUME 59/03-C OF DISSERTATION ABSTRACTS INTERNATIONAL.  
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UNIVERSITY, GULDHEDSGATAN 10A, S-413 46 GOTEBOG, SWEDEN

The non-toxic, receptor-binding B-subunit of cholera toxin (CTB) is a good mucosal immunogen, which is included in recently developed peroral vaccines against cholera and enterotoxigenic Escherichia coli (ETEC). In the first part of this study, CTB was investigated as a carrier for foreign peptide epitopes from HIV-1 gp120, hepatitis B virus pre-S(2) or ETEC heat-stable enterotoxin, which were genetically inserted at an internal site within CTB, or fused to the N-terminus. The resulting hybrid proteins retained important functional characteristics of CTB including pentamer formation and binding to GM1 ganglioside receptors, and they reacted with antibodies to the attached foreign epitopes. Mice immunised with the hybrid proteins had high titers of IgG antibody responses against CTB in serum and lower magnitudes of antibody responses against the heterologous peptides.

Second, hybrid proteins between CTB and the closely related B-subunit of Escherichia coli heat-labile enterotoxin (LTB) were constructed by substituting CTB amino acids with those at the corresponding positions in LTB, in order to obtain B-subunits which displayed both cross-reactive and toxin-specific epitopes. Mice immunised with hybrid B-subunits with LTB substitutions in the 1-25 and 94-95 regions, but not those immunised with CTB, had high levels of LTB-specific antibodies in serum, indicating that the hybrid proteins displayed novel LTB-specific epitopes, which were not present in CTB. The sera were also able to neutralise the toxic effects of both CT and LT better than sera from mice immunised with either CTB or LTB. The hybrid B-subunits are promising candidates to be included in an ETEC vaccine or in a combined cholera and ETEC vaccine.

Hybrid CT/LT B-subunits with LTB substitutions in the 1-25, 75-83 or 94-95 regions, or in combinations of these, were also used to investigate the influence of heterologous LTB amino acid substitutions on the broader receptor-specificity of LT compared to CT. The ability of the mutant B-subunits to bind to different preparations of receptors from rabbit intestine, and to isolated glycosphingolipids, was analysed. The results suggested that the interactions of LTB with different classes of non-GM1 receptors are influenced by different amino acids in the protein.

7/3,AB/57 (Item 1 from file: 348)  
DIALOG(R)File 348:EUROPEAN PATENTS  
(c) 2001 European Patent Office. All rts. reserv.

00535281  
Nematode vaccine  
Vakzin gegen Nematoden  
Vaccin contre les nematodes  
PATENT ASSIGNEE:

BIOTECHNOLOGY AUSTRALIA PTY. LTD., (374171), 28 Barcoo Street, Roseville,  
NSW 2069, (AU), (applicant designated states:  
AT;BE;CH;DE;FR;GB;IT;LI;LU;NL;SE)  
COMMONWEALTH SCIENTIFIC AND INDUSTRIAL RESEARCH ORGANISATION, (200832),  
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INVENTOR:

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Wagland Barry Maxwell, 31 Norwood Avenue, Carlingford 2118 New South Wales, (AU)

LEGAL REPRESENTATIVE:

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PATENT (CC, No, Kind, Date): EP 540128 A1 930505 (Basic)  
EP 540128 B1 960807

APPLICATION (CC, No, Date): EP 92203892 890926;

PRIORITY (CC, No, Date): AU 88621 880926

DESIGNATED STATES: AT; BE; CH; DE; FR; GB; IT; LI; LU; NL; SE

RELATED PARENT NUMBER(S) - PN (AN):

EP 391997 (EP 899109953)

INTERNATIONAL PATENT CLASS: C12N-015/12; A61K-039/00; C07K-014/435;  
C07K-016/18; A61K-039/395; G01N-033/569;

ABSTRACT EP 540128 A1

An antigen comprising: an excretory/secretory protein derived from a parasitic stage of *Trichostrongylus colubriformis* having an approximate molecular weight of 11kD, 17kD, 30kD, 37kD or 81kD as estimated by SDS-PAGE; or a part, an analogue, a homologue, a derivative or combinations thereof of said excretory/secretory protein, which antigen is capable of conferring protective immunity on a host against infection by a parasitic nematode.

ABSTRACT WORD COUNT: 65

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS B	(English)	EPAB96	1371
CLAIMS B	(German)	EPAB96	1206
CLAIMS B	(French)	EPAB96	1436
SPEC B	(English)	EPAB96	9438
Total word count - document A			0
Total word count - document B			13451
Total word count - documents A + B			13451

7/3,AB/58 (Item 2 from file: 348)

DIALOG(R)File 348:EUROPEAN PATENTS

(c) 2001 European Patent Office. All rts. reserv.

00508279

%VACCINES%

IMPFSTOFFE

%VACCINS%

PATENT ASSIGNEE:

EVANS MEDICAL LIMITED, (1946510), Evans House, Regent Park, Kingston Road, Leatherhead, Surrey KT22 7PQ, (GB), (applicant designated states: AT;BE;CH;DE;DK;ES;FR;GB;GR;IT;LI;LU;NL;SE)

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PATENT (CC, No, Kind, Date): EP 546036 A1 930616 (Basic)  
EP 546036 B1 971015  
WO 9203162 920305

APPLICATION (CC, No, Date): EP 91915775 910823; WO 91GB1426 910823

PRIORITY (CC, No, Date): GB 9018690 900824

DESIGNATED STATES: AT; BE; CH; DE; DK; ES; FR; GB; GR; IT; LI; LU; NL; SE

INTERNATIONAL PATENT CLASS: A61K-039/145; A61K-009/127;

NOTE:

No A-document published by EPO

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS B	(English)	9710W2	284
CLAIMS B	(German)	9710W2	287

CLAIMS B (French) 9710W2 315  
SPEC B (English) 9710W2 4938  
Total word count - document A 0  
Total word count - document B 5824  
Total word count - documents A + B 5824

7/3,AB/59 (Item 3 from file: 348)  
DIALOG(R)File 348:EUROPEAN PATENTS  
(c) 2001 European Patent Office. All rts. reserv.

00451036

Fusion proteins comprising TraTp and at least one LHRH analogue  
Fusionsproteine bestehend aus TraTp und mindestens einem LHRH-Analog  
Proteines de fusion comprenant TraTp et au moins un analogue de LHRH  
PATENT ASSIGNEE:

BIOTECHNOLOGY AUSTRALIA PTY. LTD., (374171), 28 Barcoo Street, Roseville,  
NSW 2069, (AU), (applicant designated states:  
AT;BE;CH;DE;DK;ES;FR;GB;IT;LI;LU;NL;SE)

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, (AU)

STEWART, Andrew, George, 26 Bobbin Head Road, Pymble, NSW 2073, (AU)

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PATENT (CC, No, Kind, Date): EP 446313 A1 910918 (Basic)  
EP 446313 A1 920819  
EP 446313 B1 960731  
WO 9102799 910307

APPLICATION (CC, No, Date): EP 90912564 900824; WO 90AU373 900824

PRIORITY (CC, No, Date): AU 895979 890825

DESIGNATED STATES: AT; BE; CH; DE; DK; ES; FR; GB; IT; LI; LU; NL; SE

INTERNATIONAL PATENT CLASS: C12N-015/62; C12N-015/70; C12P-021/02;  
C07K-007/23; A61K-039/385; A61K-038/24;

NOTE:

No A-document published by EPO

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS B	(English)	EPAB96	765
CLAIMS B	(German)	EPAB96	675
CLAIMS B	(French)	EPAB96	778
SPEC B	(English)	EPAB96	9185
Total word count - document A			0
Total word count - document B			11403
Total word count - documents A + B			11403

7/3,AB/60 (Item 4 from file: 348)  
DIALOG(R)File 348:EUROPEAN PATENTS  
(c) 2001 European Patent Office. All rts. reserv.

00419235

Fused proteins and production thereof.  
Fusionsproteine und Herstellung davon.  
Proteines fusionnees, et leur production.

PATENT ASSIGNEE:

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INVENTOR:

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Mayumi, Aki, 295, Ikejiri, Osaka-sayama, Osaka 589, (JP)

Yamamoto, Tatsuo, 1-30, Nakashinjuku 1-chome, Kashiwa, Chiba 277, (JP)

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von Kreisler, Alek, Dipl.-Chem. et al (12434), Patentanwälte von  
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PATENT (CC, No, Kind, Date): EP 418626 A2 910327 (Basic)

EP 418626 A3 910925  
EP 418626 B1 931229

APPLICATION (CC, No, Date): EP 90116878 900903;

PRIORITY (CC, No, Date): JP 89233728 890908

DESIGNATED STATES: AT; BE; CH; DE; DK; ES; FR; GB; GR; IT; LI; LU; NL; SE

INTERNATIONAL PATENT CLASS: C07K-013/00; A61K-039/108; A61K-039/295;

A61K-039/245; C12N-015/62; C12N-015/31; C12N-015/38;

ABSTRACT EP 418626 A2

Disclosed are (1) a fused protein comprising heat-labile enterotoxin %B% %subunit% and a protein heterologous to heat-labile enterotoxin, (2) a recombinant DNA containing a nucleotide sequence coding for the above fused protein, (3) a transformant harboring the above recombinant DNA, (4) a method for producing the fused protein which comprises cultivating the above transformant, producing and accumulating the above fused protein in a culture, and collecting the fused protein, and (5) a method for purifying a fused protein comprising a herpes simplex virus surface antigen and heat-labile enterotoxin %B% %subunit%, which comprises cultivating a transformant harboring a recombinant DNA containing a nucleotide sequence coding for the fused protein, producing an accumulating the fused protein in a culture, collecting the fused protein and subjecting the collected fused protein to purification processes comprising cationic exchange chromatography and gel permeation chromatography.

ABSTRACT WORD COUNT: 142

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS B	(English)	EPBBF1	1376
CLAIMS B	(German)	EPBBF1	1153
CLAIMS B	(French)	EPBBF1	1597
SPEC B	(English)	EPBBF1	5027
Total word count - document A			0
Total word count - document B			9153
Total word count - documents A + B			9153

7/3,AB/61 (Item 5 from file: 348)

DIALOG(R)File 348:EUROPEAN PATENTS

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00411629

PROTEINS FOR FUSING THE SUB-UNIT B OF THE CHOLERAIC TOXIN AND HETEROLOGOUS ANTIGEN, AND NUCLEIC ACIDS ENCODING THEM.

FUSIONSPROTEINE DER UNTEREINHEIT B VON CHOLERATOXIN UND EINES HETEROLOGEN ANTIGENS UND DAFÜR KODIERENDE REKOMBINANTE NUKLEINSÄURE.

PROTEINES DE FUSION DE LA SOUS-UNITE B DE LA TOXINE CHOLERIQUE ET D'UN ANTIGENE HETEROLOGUE ET ACIDES NUCLEIQUES LES ENCODANT.

PATENT ASSIGNEE:

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(applicant designated states: AT;BE;CH;DE;FR;GB;IT;LI;LU;NL;SE)  
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Chauveau-Lagarde, F-75008 Paris, (FR)

PATENT (CC, No, Kind, Date): EP 445128 A1 910911 (Basic)

EP 445128 B1 950607

WO 9003437 900405

APPLICATION (CC, No, Date): EP 11564 890927; WO 89FR495 890  
PRIORITY (CC, No, Date): FR 8812627 880927  
DESIGNATED STATES: AT; BE; CH; DE; FR; GB; IT; LI; LU; NL; SE  
INTERNATIONAL PATENT CLASS: C12N-015/62; C07K-002/00; C12N-015/31;  
C12N-015/40; C12N-015/43; C12N-015/50; A61K-039/106; A61K-039/13;  
A61K-039/225; A61K-039/295; A61K-039/39

NOTE:  
No A-document published by EPO  
LANGUAGE (Publication,Procedural,Application): French; French; French  
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS B	(English)	EPAB95	226
CLAIMS B	(German)	EPAB95	206
CLAIMS B	(French)	EPAB95	222
SPEC B	(French)	EPAB95	13188
Total word count - document A			0
Total word count - document B			13842
Total word count - documents A + B			13842

7/3,AB/62 (Item 6 from file: 348)  
DIALOG(R)File 348:EUROPEAN PATENTS  
(c) 2001 European Patent Office. All rts. reserv.

00372607  
Heat-labile toxin %B% %subunit% fusion proteins.  
Hitze-labile Toxin B-Untereinheit-Fusionsproteine.  
Proteines de fusion de la sous-unite B de la toxine labile a la chaleur.  
PATENT ASSIGNEE:

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INVENTOR:  
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Aitken, Rober, Adrian Building University Road, Leicester LE1 7RH, (GB)

LEGAL REPRESENTATIVE:  
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Gray's Inn, London WC1R 5EU, (GB)

PATENT (CC, No, Kind, Date): EP 372928 A2 900613 (Basic)  
EP 372928 A3 900627

APPLICATION (CC, No, Date): EP 89312713 891206;  
PRIORITY (CC, No, Date): GB 8828523 881207; GB 8913991 890617  
DESIGNATED STATES: AT; BE; CH; DE; ES; FR; GB; GR; IT; LI; LU; NL; SE  
INTERNATIONAL PATENT CLASS: C12N-015/62; C12N-015/31; C07K-015/00;  
A61K-039/116;

ABSTRACT EP 372928 A2

A fusion protein comprises subunit B of %E%. %coli% heat-labile toxin ( %LTB%) having an antigen or epitope from a pathogen responsible for a human or veterinary disease fused to the carboxy-terminus of %LTB%. Such a fusion protein is obtained by culturing a host, such as a strain of %E% . %coli%, which has been transformed by a vector capable of expressing the fusion protein in that host. The fusion protein can be used as a %vaccine%.

ABSTRACT WORD COUNT: 79

LANGUAGE (Publication,Procedural,Application): English; English; English  
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	EPABF1	406
SPEC A	(English)	EPABF1	4265
Total word count - document A			4671
Total word count - document B			0
Total word count - documents A + B			4671

7/3,AB/63 (Item 1 from file: 51)  
DIALOG(R)File 51:Food Sci.&Tech.Abs



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00612594 90-10-c0095 SUBFILE: FSTA

Recombinant system for overexpression of cholera toxin %B% %subunit% in *Vibrio cholerae* as a basis for %vaccine% development.

Sanchez, J.; Holmgren, J.

Dep. of Med. Microbiol., Univ. of Goeteborg, Goeteborg S-413 46, Sweden

Proceedings of the National Academy of Sciences of the United States of America 1989 , 86 (2) 481-485

LANGUAGE: English

*Vibrio cholerae* of serogroup 01 and enterotoxigenic %*Escherichia*% %coli% may induce diarrhoea when multiplying in the gut of infected individuals by releasing cholera toxin (CT) or heat-labile enterotoxin (LT), resp. These toxins are very similar structurally and functionally and are composed of 2 types of subunits, a single copy of A (CTA or LTA), which is responsible for activation of the adenylate cyclase in the intestinal cell of the host, and a pentamer of B (CTB or %LTB%), which binds the respective %holotoxin% to its intestinal receptor. CTB is an effective oral immunizing agent against both cholera and enterotoxigenic %E%. %coli%-caused diarrhoea.) An overexpression system in which the gene encoding CTB was placed under the control of the strong tacP promoter in a wide host range plasmid was constructed. Recombinant nontoxigenic classical and El Tor *Vibrio cholerae* strains of different serotypes harbouring this plasmid excreted 10- to 100-fold higher amounts of CTB than any other wild-type or recombinant strain tested and may therefore be useful (as) killed oral %vaccine% strains. The manipulations to place the CTB gene under tacP also included, by design, the introduction of single enzyme restriction sites for gene fusions to the CTB amino terminus. Cloning into these sites allows construction of CTB-derived hybrid proteins carrying various putative %vaccine% peptide antigens. (AS)

7/3,AB/64 (Item 1 from file: 484)

DIALOG(R)File 484:Periodical Abs Plustext

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03279696 (USE FORMAT 7 OR 9 FOR FULLTEXT)

Edible %vaccines%

Arntzen, Charles J

Public Health Reports (PPHL), v112 n3, p190-197, p.8

May 1997

ISSN: 0033-3549 JOURNAL CODE: PPHL

DOCUMENT TYPE: Feature

LANGUAGE: English

RECORD TYPE: Fulltext; Abstract

WORD COUNT: 3828

ABSTRACT: Arntzen describes a promising approach to inexpensive and effective %vaccines%: producing them in plants that are commonly consumed.

7/3,AB/65 (Item 1 from file: 16)

DIALOG(R)File 16:Gale Group PROMT(R)

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05377798 Supplier Number: 48177686

Influenza "Effects of Frequent Intranasal Administration of

Adjuvant-Combined Influenza %Vaccine% on the Protection Against Virus Infection."

Tuberculosis & Airborne Disease Weekly, pN/A

Dec 15, 1997

Language: English Record Type: Fulltext

Document Type: Newsletter; Trade

Word Count: 291

7/3,AB/66 (Item 2 from file: 16)

DIALOG(R)File 16:Gale Group PROMT(R)

(c) 2002 The Gale Group. All rights reserved.

04420298 Supplier Number: 464819  
Diarrhea Broad-Spectrum %Vaccine% Based on Mutant Cholera Toxin  
Infectious Disease Weekly, pN/A  
June 24, 1996  
Language: English Record Type: Fulltext  
Document Type: Newsletter; Professional Trade  
Word Count: 250

7/3,AB/67 (Item 3 from file: 16)  
DIALOG(R)File 16:Gale Group PROMT(R)  
(c) 2002 The Gale Group. All rts. reserv.

03989271 Supplier Number: 45792366  
Drug Development "Design of an Antigen Delivery System/Adjuvant %Vaccine%  
for Inducing Protective Immunity." S.M. Michalek, T. Redman, N. Childers,  
E. Harokopalds and T. Greenway. Department of Microbiology, School of  
Dentistry, The University of Alabama at Birmingham, Alabama.  
Vaccine Weekly, pN/A  
Sept 18, 1995  
Language: English Record Type: Fulltext  
Document Type: Newsletter; Trade  
Word Count: 224

7/3,AB/68 (Item 1 from file: 636)  
DIALOG(R)File 636:Gale Group Newsletter DB(TM)  
(c) 2002 The Gale Group. All rts. reserv.

02856947 Supplier Number: 45793429  
Drug Development "Design of an Antigen Delivery System/Adjuvant %Vaccine%  
for Inducing Protective Immunity."  
Gene Therapy Weekly, pN/A  
Sept 18, 1995  
Language: English Record Type: Fulltext  
Document Type: Newsletter; Professional Trade  
Word Count: 254

7/3,AB/69 (Item 2 from file: 636)  
DIALOG(R)File 636:Gale Group Newsletter DB(TM)  
(c) 2002 The Gale Group. All rts. reserv.

02807367 Supplier Number: 45695388  
Conference Coverage Candidate %Vaccines% Against Flu, Chlamydia Reported  
Infectious Disease Weekly, pN/A  
July 31, 1995  
Language: English Record Type: Fulltext  
Document Type: Newsletter; Professional Trade  
Word Count: 664

7/3,AB/70 (Item 1 from file: 266)  
DIALOG(R)File 266:FEDRIP  
Comp & dist by NTIS, Intl Copyright All Rights Res. All rts. reserv.

00230835  
IDENTIFYING NO.: 7097 AGENCY CODE: SBIR  
ORAL MALARIA %VACCINE% DEVELOPMENT IN A PLASMODIUM BERGHEI MODEL  
PRINCIPAL INVESTIGATOR: Brey, R. N.  
PERFORMING ORG.: Praxis Biologics, 30 Corporate Woods Suite 300,  
Rochester, NY 14623  
SPONSORING ORG.: HHS  
DATES: 1987 FY: 1990 FUNDS: \$550,000 ( 0000000)  
SUMMARY: PEPTIDE CARRIER AND RECOMBINANT DNA-PRODUCED PLASMODIUM  
FALCIPARUM SPOROZOITE SUBUNIT %VACCINES% HAVE BEEN TESTED IN CLINICAL  
TRIALS. THESE %VACCINES% HAVE BEEN DESIGNED TO INDUCE HIGH-TITER PROTECTIVE  
ANTISPOROZOITE ANTIBODIES. CLINICAL TRIALS HAVE INDICATED THAT THESE  
%VACCINES% ARE ONLY PARTLY EFFECTIVE. RECENT STUDIES COMPARED ANALOGOUS

PEPTIDE AND RECOMBINANT SUBUNIT %VACCINES% WITH SPOROZOITE-INDUCED IMMUNITY IN THE PLASMODIUM BERGHEI MODEL. THESE STUDIES SHOWED THAT PARENTERALLY ADMINISTERED P. BERGHEI SUBUNIT %VACCINES% INDUCE HIGH-TITER SPOROZOITE ANTIBODY THAT IS PARTIALLY PROTECTIVE AT LOW-SPOROZOITE CHALLENGE DOSES. IN CONTRAST, SPOROZOITE-INDUCED IMMUNITY, FULLY PROTECTIVE AT 20 TIMES THE CHALLENGE, IS MEDIATED BY CELLULAR IMMUNITY. THESE PHASE I STUDIES ARE DESIGNED TO EXAMINE THE FEASIBILITY OF IMMUNIZING MICE AGAINST P. BERGHEI SPOROZOITES, A RODENT MALARIA PARASITE, BY ORAL %VACCINATION%. %VACCINATION% OF MICE WITH AN ATTENUATED SALMONELLA STRAIN HARBORING PLASMIDS THAT DIRECT THE EXTRACYTOPLASMIC LOCALIZATION OF THE P. BERGHEI CIRCUMSPOROZOITE PROTEIN (CS) IS EXPECTED TO ELICIT NOT ONLY ANTIBODY-MEDIATED BUT ALSO CELL-MEDIATED IMMUNE RESPONSES. THE P. BERGHEI CS GENE WILL BE FUSED TO THE GENE ENCODING THE %B% %SUBUNIT% OF THE HEAT-LABILE ENTEROTOXIN OF %E%. %COLI% (%LTB%) AT VARIOUS LOCATIONS, AND THE FUSION PROTEIN WILL BE TESTED FOR IMMUNOGENICITY. IF THESE STUDIES ARE SUCCESSFUL, ANALOGOUS ORAL MALARIA %VACCINES% COULD BE DEVELOPED FOR HUMANS.

7/3,AB/71 (Item 1 from file: 347)  
DIALOG(R) File 347:JAPIO  
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03516095  
PROTEIN AND PREPARATION THEREOF

PUB. NO.: 03-178995 [JP 3178995 A]  
PUBLISHED: August 02, 1991 (19910802)  
INVENTOR(s): FUJISAWA YUKIO  
HINUMA KUNIIJI  
MAYUMI AKI  
YAMAMOTO TATSUO  
APPLICANT(s): TAKEDA CHEM IND LTD [000293] (A Japanese Company or Corporation), JP (Japan)  
APPL. NO.: 02-235613 [JP 90235613]  
FILED: September 07, 1990 (19900907)  
JOURNAL: Section: C, Section No. 880, Vol. 15, No. 429, Pg. 85,  
October 31, 1991 (19911031)

#### ABSTRACT

NEW MATERIAL: A fused protein between a thermolabile enterotoxin %B% %subunit% (hereinafter referred to as %LTB%) and a kind of protein different from the thermolabile enterotoxin (hereinafter referred to as LT).

USE: Useful as an immunogen for treatment %vaccines% or prevention %vaccines% or useful for the treatment of various diseases. The fused protein can be efficiently absorbed from the tissue of nasal membrana mucosa.

PREPARATION: A DNA coding %LTB% (preferably %LTB% produced from enterotoxigenic %Escherichia% %coli% separated from man) is first combined with a DNA coding a kind of protein (e.g. HSV surface protein which is a SHV antigen) different from LT to prepare a fused gene. The fused gene is linked to the downstream portion of a promoter in a manifestation vector to prepare a manifestation vector having a DNA coding the fused protein. A host cell is transformed with the manifestation vector and the transformed product is cultured to prepare the fused protein.

?